













# INDIAN RECREATIONS ;

CONSISTING

*CHIEFLY OF STRICTURES*

ON THE

DOMESTIC AND RURAL ECONOMY

OF THE

*MAHOMMEDANS & HINDOOS.*



---

BY THE REV. WILLIAM TENNANT, LL.D. M.A.  
AND LATELY ONE OF HIS MAJESTY'S CHAPLAINS IN INDIA.

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## PREFACE.

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As each of the sections in this volume contains a short essay on the particular subject treated of, a perfect arrangement of the different parts of Rural Economy has not been so much studied as variety : Some of the agricultural details are unavoidably minute ; and it has been deemed eligible to relieve the reader's attention by introducing other topics, less tedious, and more interesting to the generality of readers. In a few instances facts are alluded to, and authors quoted, posterior to the date of these Essays ; this the author thought himself warranted to do when the work was in the press ; judging that his readers would be desirous to see his ideas confirmed, and his reasonings

reasonings elucidated by every authority he could procure.

IN acquiring the necessary information regarding the various branches of rural economy contained in this volume, the author obtained the same valuable assistance he enjoyed in treating the different subjects discussed in the first; he has therefore good reason to think that in no article of importance his readers can be misled; and will hope to receive from them that indulgence which one of the more correct of the ancients has offered to his contemporaries, and to posterity :

*Non ego paucis  
Offendar maculis, quæ aut incuria judit  
Aut humana parum clevit natura.*

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## ERRATA.

.....

### PAGE.

- 5 l. 5. *for on, read on data.*  
16 l. 5. *for over-reaped, read overcropped.*  
56 l. 5. *from bottom, for pidgeon, read widgeon.*  
76 l. 13. *for with, read within.*  
97 l. 2. *for then, read there.*  
157 l. 12. *for sanction, read exertion.*  
~~192 l. 1. left for Sochar, read Lochar.~~  
278 l. 9. *for heading, read treading.*  
314 l. 9. *from bottom, for higher, read lighter.*  
378 l. 3. *from bottom, for fortunately, read unfortunately.*  
382 l. 4. *from bottom, for Barcilly, read Bareilly.*  
381 l. 3. *for ready, read reedy.*  
395 l. 2. *from bottom, for often, read after.*

# INDIAN RECREATIONS:



## THE POPULATION OF BRITISH INDIA.

.....

*Calcutta, Jan. 1757*

THE population of this country cannot be ascertained, as in Europe, by public registers of births, marriages, or burials. Loose and inaccurate, as the calculations there have hitherto been, they are founded on more certain data than can be obtained in India.

THE same tillage, and proportion of manufactures, support a much greater number of people here, than they could maintain in Britain; and the latest computations rise considerably higher than those loose conjectures that were formerly hazarded on this subject. These estimated the population of Bengal, and the upper provinces, at eleven millions; and that of our possessions in the Deccan, at nine. About nine

VOL. II. A years

years ago, the collectors were required to give an opinion of the population of their respective districts, and their report founded an estimate of twenty-two millions for the inhabitants of Bengal and Behar.

By an official enquiry made in the district of Purnea, there were found 80,914 Ryuts holding leases; 22,324 artificers paying ground rent, in 2,784 villages, upon an area of 2,531 square miles. Allowing the number of five to a family, this gives about 2003 to a square mile. The whole provinces in this presidency contain 162,500 square miles; and by this estimate, a population of nearly thirty-three millions. In this district there are a few lands amounting to an eighth part of the whole, that are not included; nor the inhabitants of any city or considerable town. Although, therefore, one eighth part of Bengal be allowed for waste land, this calculation will apply to it without much deduction.

ACTUAL surveys have been made of different districts; and in these the land occupied in tillage has been distinguished from that occupied by water, or waste; and the proportion of the latter description has been found to be about one fourth of the whole surface. The cultivated land in Bengal, applying this proportion, will amount to 31,331,499 acres; and it has been found by actual enquiry into the extent of land occupied by 70,000 cultivators, that each possessed about eighteen begahs in actual tillage. Hence the cultivated acres in Bengal, above stated, require

require 5,265,432 tenants. To these the proportion of artificers and manufacturers must be added, which has been found to be eleven to forty, which gives 6,718,154 heads of families, at five persons each; or 33,590,770 for the number of inhabitants.

A THIRD estimate of the population of these provinces has been founded on the average rent paid by each tenant. The rent roll produced by 65,047 leases, has been found to amount to 498,020 S. Rs. or nearly seven rupees to each tenant.

THE gross rent paid by the farmers the first year of the permanent settlement amounted to 3,63,88,129 Rs. or 6,064,688 tenants; whose families, at five each, give a population of above thirty millions of inhabitants. The near coincidence of these results from different grounds, support in some degree the credibility of each.

THE population of this country has been estimated from the consumption. The most common articles of diet which may be deemed the necessaries of life to a native, are rice, split pease, and salt: eight pounds of the first article, two of the second, and two ounces of salt, is reckoned the daily consumption of a family consisting of five persons in easy circumstances. Hence the yearly supply of salt for each individual is nine pounds. A considerable portion of the salt manufactured in Bengal is exported: on the other hand, the mountaineers of the west, use either rock salt, or

an impure composition extracted from ashes or from nitre. Hence the quantity consumed may probably correspond nearly to that manufactured in the country; and the annual sales amount to 35,31,944 maunds, which require for consumption 32,228,986 individuals.

THE fifth and last method which has been adopted for ascertaining the population here has been estimating the whole produce of the cultivated acres according to the above rate of consumption in each family allowing for seed and a small proportion for the use of cattle. To 47,77,797 begahs in cultivation this gives a gross produce of 34,28,57,140 maunds. The average value of this annual produce, may amount to 20,50,000 Rs. a sum corresponding to ten rupees and a half for each acre: a very moderate produce, but not disproportioned to the exertions of Indian husbandry.

FROM our late acquisitions in the Myfore and Carnatic, the population of that part of the British possessions must be more than double within these last five years. Eighteen or twenty millions cannot be reckoned an extravagant estimate for so large a country—If in fact the number of people fall short of this computation in the Deccan, the deficiency must be more than compensated by large acquisitions of territory from the provinces of Owde. The dominions of the East-India Company, therefore, contain a population of probably not less than fifty millions of souls: an estimate,

estimate, whether extravagant or not, certainly far short of the number capable of finding maintenance, on such a vast tract of fertile soil, lying in a climate propitious to all the operations of husbandry.

THESE computations are founded on furnished by a learned judge who, from long residence in the country, and a perfect knowledge of the language, is, perhaps, more intimately acquainted with its situation than any other person in India. After all, however, it is not pretended, that an accurate state of the population can be given till each collector in his district make out an exact return. The populousness of this country, when ascertained, will always afford a pretty just idea of the nature of its government: the early and productive marriages of the Hindoos will always bring the number of people to correspond with the means of supply: the latter will be in proportion to the degree of protection and security afforded.

IN a society consisting almost entirely of labourers, whose food and cloathing is so limited, little scope is afforded to agriculture or manufactures, in supplying its own wants. The increase of exported produce can alone give room for greater tillage, and call forth a larger portion of industry, and of hands to manufactures. "The inhabitants, wanting a vent for their produce, have no inducement to greater industry. If more produce were attained, its market being barred, industry would be unrewarded. The necessities

faries of life are cheap ; the mode of living simple ; and, though the price of labour be low, a subsistence may be earned without the uninterrupted application of industry. Often idle, the peasant and manufacturer may, nevertheless, subsist. A few individuals might acquire wealth, by diligent application ; but the body of the people, doomed to poverty by commercial limitations, can apply no more labour than the demand of the market is permitted to encourage. If industry be encouraged, the present population is sufficient to bring into tillage the whole of the waste lands of Bengal and Bahar ; and in most districts improvement may be expected whenever new channels of trade are opened, to take off more or new articles of produce\*.”

THE husbandry of India, probably, requires a greater number of hands to the same extent of ground than that of England, as here the same field in the common culture, yields several crops, two, and often three, within the year. The operations of the farmer, though less interrupted by weather, are more numerous ; indeed they cannot be said ever to cease. The different varieties of pulse and millet have scarcely any appropriate season. They vegetate rapidly ; and are useful in occupying an interval after a late harvest, which will not permit the usual course of husbandry. The oil plants in general ripen in the winter, excepting the Sesame, which is gathered in the rains.

FROM

\* Remarks on the Agriculture &c. of Bengal.

FROM the circumstance of the people living on vegetable diet, and their climate yielding several crops in the year, some good judges have supposed, that four times the number of people might be maintained on the same quantity of land, that can be done in Britain.

IMPERFECTIONS



IMPERFECTIONS OF HINDOO HUSBANDRY, AND THE OB-  
STACLES TO ITS IMPROVEMENT.

.....

*Berhampore,* 1797.

WITH an excellent soil, and climate, and possessed of almost every variety of cultivated grain, and a competent number of hands to raise them, the imperfection of husbandry in Hindostan is far greater than we should have expected.

1. THE best season of sowing is not sufficiently attended to: the month of the rains has been found the most advantageous period for rice, since it admits of the harvest in the commencement of the dry weather. Hence the rice of this season is not only most plentiful, but is not liable to early decay. From the want of a sufficient number of hands, industry and capital, this crop is sometimes sown in the dry weather, and at the beginning of the rains, when the return is never equally profitable. In the

the case of sowing during the dry season, the expence of irrigation becomes so great as must encroach deeply on the profits. Though several seasons occur here in the same year, yet much greater attention to the period suitable for different crops, than is paid by the farmer, is necessary.

2. THE Hindoo peasant is deficient in the choice and selection of the best varieties of each grain. The culture of almost every plant and particularly of the *gramina*, in proportion as it has been long diffused, induces numerous varieties. The several seasons of cultivation, added to the influence of soil and climate, have multiplied the different species of rice, into endless variety. From the awned and unawned, from that growing on the mountains to that produced in humid situations, there are various diversities adapted to every circumstance of soil, climate, and season, which might exercise the judgment of sagacious cultivators, but which the Hindoo overlooks, except in the most obvious cases. The enlightened farmers in Britain would here find ample room for improvement.

Of wheat and barley there are much fewer varieties: and I do not find in practice, that the simple expedient of changing the seed is attended to. The most common samples are small, and not sufficiently plump. The barley is probably too mean a species for our excellent soil and climate. It is invariably big, or the *Hordeum tetraastichum* of Linnæus. The

wheat is a small long awned variety, apparently unchanged for many centuries.

3. THERE is great want of green crops for house feeding: a circumstance the more remarkable, since, during the dry months, the fields not in crop, are reduced to a state of absolute sterility, and the stock barely kept alive. This is the more inexcusable, because there is in the occupation of husbandry here every variety of pulse that is known. No season is without its appropriate species; but most species are sown or ripen in the winter.

As all these thrive on poor soils, and require but little cultivation, they would prove most valuable products in husbandry, could they be administered as green food, or applied as hay. The millets are also in great variety: they bear a low price; and are the food of the poorest classes. Several of these grains are restricted to no season; vegetate rapidly, and occupy intervals between other crops: yet no contrivance has been fallen upon to have a sufficient supply of them for the sustenance of live stock during winter and spring. The maize, though the most productive of all corn, and not inferior as human food, has not yet been converted to this purpose. The coarse straw of this and some other sorts of corn seem to make up the whole of the wretched provender of this country, where the cattle that survive hunger, at certain seasons are barely able to walk.

4. THE universal use, and vast consumption of vegetable oils must be regarded as in some respects prejudicial to agriculture. Much labour, and a great proportion of the cultivated land is occupied in the produce of this article, which might partly be saved by the use of animal food: oil is necessary to season and enrich their food, where deprived of that article of diet. In anointing the body, and in supplying their lamps, immense quantities are consumed. Hence the extensive cultivation of lintseed, palma christi, sesamum, and many other articles that trench deeply upon the productive grounds for human sustenance: this must be highly disadvantageous, if it be true as some have alledged, that all crops are scourgers, in proportion to the oil they contain.

5. AMONG the imperfections of our husbandry the too scanty cultivation of the most valuable crops cannot be omitted. Tobacco, sugar, indigo, cotton, mulberry, and poppy, are by far the most important productions of Bengal: these are not only rich in proportion to the land they occupy, but are most valuable in commerce and manufactures. They require land highly cultivated, and appropriated to their production; and there can remain no doubt, that a spirited husbandry would convert a far greater proportion of the land to these valuable productions. These do not hitherto occupy perhaps the twentieth part of the land which a greater capital, and more active husbandry would force into their production. This end once accomplished, the number

of productive labourers, and the profits of husbandry would be encreased in a very great degree. Sugar, as it ripens during the end of the dry season, might of itself probably supply the grand desideratum of Indian husbandry, the want of green food for cattle. It is the most nutritious of all vegetable food for every animal, that has yet been fed with it.

6. THE paltry and insufficient implements of husbandry forms another great obstacle to good cultivation. In Spain, Italy, and the southern countries of Europe, these implements are bad ; but yet here they are outdone by the Hindostanee spade or short hoe, by the wretched substitute for a harrow, and the trifling plough. Two or three pair of oxen are assigned to each plough relieving one another, till the daily task be compleated. Several ploughs in succession deepen the same furrow. or rather scratch the surface ; for the plough wants a contrivance for turning the earth, and the share has neither width nor depth to stir a new soil. A second plowing crosses the first ; and a third is sometimes given diagonally to the preceding. These are frequently repeated, and followed by the substitute for the harrow before the tilth can be compleated. The weeders use the short handled spade, and sit down to their work : However familiar that posture may be to an Indian, his labour is not employed to advantage in this mode of weeding.

EXPENSIVE implements of husbandry, or complex machinery, are, perhaps, not necessary in oriental agriculture

agriculture, yet it cannot fail to strike every observer that their tools are far below the standard necessary for cheap and well executed labour.

THE universal use of the reaping hook, instead of the scythe, occasions also much unnecessary labour. This does not arise merely from the want of a more expeditious implement, but from the practice of selecting the ripest plants, which wastes much time, while it damages the crop. Even the advantages of this practice are not fully gained; for, in one field, while the Ryut gathers the plants as they ripen, in another you will see the crop allowed to pass the period of maturity. The loss thus incurred by the grain which drops before harvest, is so considerable, that if the field remains unsown, it will afford a crop by no means contemptible.

7. TILL lately the want of roads was much felt in Great Britain; in Hindostan, this want still continues to operate with full force against its rural economy. From the low humid situation of Bengal, roads could not easily be provided so as to give access to every field, in every season; in the dry months, however, it would prove of vast advantage to the farmer to be enabled to carry his produce, by wheel carriage, instead of the tedious method of burdens which he now uses. In forwarding the operations of husbandry nothing is more effectual than good roads; it is the first step to all solid improvement; and the simple fact, that the Hindoo does not

. carry

carry home his crop by means of cattle, is of itself a strong proof of a state of husbandry disproportioned to the population of the country. The boasted roads of Shah Jehan, and some of the Emperors, are still to be seen in their remains; but they probably were never very substantial; otherwise they could not have been so soon defaced. The high roads constructed by the Company, are perhaps better executed, but are by far too partial to afford any relief to the country.

8. In every hot climate, irrigation is the grand instrument of fertilization: in the higher parts of Bengal, as well as in the interior of Hindostan, it is the indispensable requisite of good husbandry. From what we learn of China, the rural economy of India appears extremely defective in the article of irrigation, although this subject is less neglected than that of transport. In the management of forced rice, dams retain the water on extensive plains; or reserve it in lakes, to water lower lands as occasion requires. In the same culture, ridges are raised round the field to retain water, which is raised by the simple contrivance of a curved canoe swinging from a pole. In other situations, ridges are also raised round the fields, both to separate lands, and to conduct the water on considerable tracts. Water raised by the hand, or by cattle from wells, supplies the deficiency of rain in some districts. Each of these methods, being within their own compass, is executed by the peasants themselves. But those extensive canals

nals which were dug in the neighbourhood of Delli, and in the Panjab, are not now in use; nor is that machinery, so general in China, any where used in India for raising water, though the beneficial effects of it are fully known from experience. Reservoirs, water courses, and dykes, are more generally in a progress of decay than of improvement.

9. THE succession of crops, which engages so much of the attention of enlightened cultivators in Europe, and on which principally rests the success of a well conducted husbandry, is not understood in India. A course extending beyond the year, has never been dreamt of by a Bengal farmer: in the succession of crops within the year, he is guided by no choice of an article adapted to restore the land impoverished by a former crop. His attention being fixed on white corn, other cultivation only employs the intervals of leisure, which the seasons of white corn allow to the land and to labour. It is scarcely possible to specify the different courses which obtain in a practice regulated by no other principle than convenience of time; it is no less difficult to enumerate the various combinations of different articles grown together upon the same field, or in the stubble of a former harvest, or sown for a future crop before the preceding harvest be gathered.

A competent notion may be formed of this practice, by conceiving a farmer eager to obtain the utmost possible produce from his land without any con-

ervation



fidération of the impoverishment of the soil. It may be judged that this avidity disappoints itself, as the several articles deprive each other of nourishment, and, as the land impoverished makes bad returns for the labour and feed.

IN most situations the land over-reaped in this manner soon requires to be recruited ; the Indian allows it a lay, but never a fallow. For this there might be some apology, did the management of live stock give to lay all the benefit which belongs to this method ; but as this is not the case, the putting their lands to rest is the most inexplicable part of their whole system. When it has lain long in this state, the inefficacy of the Bengal plough is such that it must be preceded by the spade ; and the expence of this process is so considerable, that old lays are rated, in the Ayeen Acbery, at a smaller assessment, from the difficulty and expence of breaking them up.

10. IF exhausted lands in this country are ill managed by being put lay, they are still worse treated in respect to manure. The application of dung as a fuel, has almost entirely cancelled its uses as a manure. The cattle for labour, and for sustenance, are mostly fed on small commons, or other pasturage, intermixed with arable land, or fed at home on straw. The cattle for breeding, and for the dairy, are fed in numerous herds upon the forests or downs : wherever fed, their dung is carefully collected.

lected for fuel: the use of this article, as a manure, is restricted to sugar cane, mulberry, tobacco, and poppy: and in these crops it is applied from necessity; because few lands, without this stimulus, are sufficiently rich to raise these productions. Some Europeans have concluded from the practice of the Hindoos, that manure in a hot climate was unnecessary for corn crops: the Chinese, however, are of all nations the most industrious in procuring this manure, and the superiority of their crops is a full justification of the practice.

11. THE want of inclosures may be ranked among the defects of Hindoo husbandry, since cultivation suffers very considerably from the trespass of cattle. A herdsman is but a poor substitute for a dyke; he suffers not the cattle to rest, an object of no small importance; and by his occasional negligencies the crops are often hurt. Were all the land under cultivation, as in China, the benefit of inclosure might not be great; but where possessions are left partly in grass, the advantage of having them inclosed, and subdivided, must be apparent.

12. FROM the want of drill husbandry, and fallows, the land is but imperfectly cleaned, a circumstance highly prejudicial to every crop. After the grain has risen, the rapid growth of weeds demands much labour, and more particularly during the rains, when vegetation is far more rapid than in any European climate. This operation is always tedious,

and imperfectly executed in broad-cast crops. The eye is not easily reconciled to see the labourer sitting to this work, and scratching with a short hoe among the promiscuous grains, where the labour of a day is not equivalent to that of an hour in drilled crops. Wherever a country is fully peopled, as in China, and all hot climates, the culture of the garden is transferred to the field: almost every species of grain is drilled, and perfect cleanness for the admission of air, and for allowing the full growth of the plants is an indispensable requisite of correct husbandry. Even sugar cane, a plant of all others the best adapted to the drill husbandry, is in the upper provinces planted thick, and in promiscuous clumps, which neither admit of stirring the ground, the suppression of weeds, nor the free circulation of air: circumstances which alone demonstrate the imperfection of this branch of husbandry.

13. THE want of capital employed in agriculture and manufactures, cripples every enterprise in Hindostan. It not only confines and cramps the operations of the husbandman, but prevents the division of labour, and consequently the skill of every tradesman. Here every manufacturer working on his own account, conducts the whole process of his art, from the formation of his tools to the sale of his production. Unable to wait the market, or anticipate its demand, he can only follow his regular occupation, when called to it by the wants of his neighbours. In the interval he must apply to some other

employment in immediate request ; and the labours of agriculture, ever wanted, are the general resource. Thus every labourer and artisan, who has frequent occasion to recur to the labours of the field, becomes himself a tenant. Such farmers, however, are ill qualified either to plan or execute a well judged system of husbandry, and are idly employed, to the great waste of their time, in carrying to market the paltry produce of their small farms.

If India had a capital in the hands of enterprising proprietors, who employed it in husbandry and manufactures, these arts would be improved ; and with a greater quantity and better productions, the situation of labourers would be less precarious and more affluent, although the greatest part of the profit might rest with the owners of the capital. In agriculture, particularly, which is the basis of prosperity, the want of capital is a bar to all improvement. Supplied with it larger farms would be occupied, greater enterprise, and better information would ensue ; and thus the various obstacles to its success would be discovered and overcome.

• 14. BUT the great impediment to improved husbandry in India has ever been the want of secure leases, and a permanent interest in their possessions. Hence the levying of rents has in general been a continued scene of fraud and evasion in one part, counteracted by plunder and oppression on the other. The nature and variety of the different tenures has  
been

been intricate and complex, almost beyond conception; and the consequence has been that hardly any lease has been specific or secure. In India the revenue of the state is, in fact, the land rent; hence the management of finances has a more immediate influence on agriculture here, than any other part of the administration. The tenant who had nothing to protect him against a whole army sent to collect the revenue, but the doubtful clauses of an obscure lease, was perfectly defenceless, and often plundered. This precarious situation, without an ascertained interest for a sufficient time, has fully demonstrated that no spirited agriculture can ever be expected in similar circumstances.

INDIAN

INDIAN MODE, OF SUPPLYING EUROPEAN TABLES.

.....

*Berhampore, Oct. 1797.*

No tables in Europe are more plentifully supplied than those of the civil servants of the Company in Bengal. If after their return to their native country, they endeavour to imitate the luxury and splendour of the highest ranks, they are led into it while they remain here by the great abundance and cheapness of all kinds of provisions. Game, poultry, fish, and water-fowl of all kinds, are in great plenty. The barn-door fowl, being a native of Asia, and in many parts here still found in its wild state, did not surprise me by its appearance, but the numbers reared by a people who do not use them as food, certainly did.

THE duck is, in Europe, perhaps the most numerous and varied species of fowls ; here the number is  
still

still superior, and the variety much greater. In many parts I have seen them offered for sale at three and four shillings per dozen.

THE poultry tribe, however, in India, with a few exceptions, are smaller in size than the same species in Britain ; and as both the grain and vegetable food in Bengal are perhaps of inferior quality, they are not supposed to possess the same richness of flavour. One thing certain is, that as you purchase them in the bazars, they are far inferior in weight ; and unless fed for some time before they are produced upon the table, they are a dry, stringy, and unpalatable food. The turkey, in particular, falls remarkably short of the same bird in Europe : there must too be a very considerable difficulty in rearing it, as its price is far more exorbitant than any of the poultry tribe in this province. A pair of good turkeys cost, in the Calcutta market, about thirty rupees, or nearly four pounds sterling. A sum for which in almost any part of the province, you can put twenty or thirty dozen of fowls upon your table.

WITH regard to the feeding of poultry of all sorts, Europeans seem fastidious ; but they justly observe, that as frogs, toads, lizards, and noisome insects, swarm upon the ground to such a degree, as to give it the appearance of being in a state of animation, it requires resolution to eat animals that are known to eat so indiscriminately. This remark with regard to the hog is so just, that you certainly cannot

not partake of it with any confidence without being acquainted with the manner of its being fattened,

For these reasons the natives are rather the breeders and rearers than the feeders of poultry and swine for the European tables. The latter business generally falls to the lot of the Portuguese of colour; or is managed in private families by their own servants:

FROM their poverty, an Hindoo family cannot afford to fatten mutton, beef, or poultry for the market: The advanced price for the provision would far exceed his capital: their industry and foresight are probably as unequal to the task as their capital; few of them could bestow upon an ox the provision which might feed such a family for months, on the distant view of drawing it back with a profit.

ANOTHER article displayed in sufficient plenty at our tables is game: this is sometimes procured by the labours of the chase, but oftener in Calcutta, by the ingenuity of the natives, who expose them for sale in the Bazar at a certain price, as well as snipes, wild ducks, partridges, pheasants, and various species of the ortolan tribe.

OF these are some varieties not known in Britain. Many kinds of game are so plenty, particularly the hares, snipes, and wild ducks; that a small sum will procure them at all seasons in abundance.

THERE



THERE is certainly a great difference in the taste of most of these animals, from that of the same species, in the higher latitudes. Either our habits deceive us, or the flavour of the deer and hare is much inferior to what is found in Europe: the remark, however, is general among Europeans, that venison in Bengal is particularly lean and insipid. The hare differs in other qualities, as well as taste, from that of North Britain: it has neither the same strength, nor swiftness, and may be sooner taken by a set of ~~ter~~riers, than yours by a couple of good grey-hounds. The same observation applies to the fox of Bengal; he is a comparatively weak and slender animal, whose velocity in the chase affords but little sport, being impeded by a bushy tail, which he carries in an erect position above his body.

THE tables of Europeans are not so much indebted for their most distinguishing ornament either to the poultry, venison, or game, as to a vast profusion of the most beautiful fruits. At an expence hardly worth attention, you may be supplied in most of the towns with a variety of the most delicious fruits, which, in Europe, hardly any fortune could procure. Above twenty different species of these are exposed to sale daily in the bazars of Calcutta, which enable the ladies of that capital to display the elegance of their china and plate on a splendid desert table, without incurring one half of the expence to which such a display of luxury would expose them, in almost any other part of the world. The Dutch merchants, in  
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their country houses around Batavia, are said to equal, or surpass the citizens of Calcutta in the luxuries of the table, and the splendour of their equipage: but as European articles are always necessary to the comfort of Europeans, the precarious intercourse which they have of late maintained with their native country, must have greatly impaired their revenues, as well as curtailed their enjoyments.

ON a future occasion, it may be worth while to give an account of the most common esculent vegetables, and fruits of Bengal: at present they are only mentioned as they affect the economy of the table.

THE Pine apple\*, from its expence and difficulty of being procured, it always associated in the mind of an European with ideas of show and magnificence. With little care of cultivation this fruit may be reared in every garden, and may be procured for a few anas, in abundance, by those who have not used the means of raising it. Inferior in richness and flavour to those raised artificially, it certainly is; but though much flavour may be lost, much still remains, and the pine apple of Bengal continues perhaps the most palatable fruit of the country.

THE Plantain, is a fruit still more wholesome, and more universally used than the pine apple, both by

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\* Bromelia Ananas, Rumph. Amboin. The name *ananas* is a corruption of the Brazilian *nana*, by the Portuguese.

Europeans and natives. It is cultivated around the meanest cottages all over the country : but in the upper provinces this fruit does not arrive at the same perfection as in Bengal. It is a biennial plant, springing from a perennial root ; during the first year it acquires its growth, and in the second it perfects its fruit. From the rapidity of growth, and the immense quantity of food which it produces, it may justly be ranked among the most useful plants : the leaves are a yard and a half in length, by eighteen inches in breadth ; and serve as wrappers for all kinds of goods, and for plates to the natives. The plant becomes in the stalk, as thick as a man's thigh ; and from a single stem, bears a bunch of fruit in quantity sometimes equal to two English stones weight.

It is happy for the natives, that they have not attempted to convert this weighty saccharine produce into a fermented liquor, which it would certainly yield in great abundance, but which would by no means be equally innocent in its effects, as in that state in which nature affords it.

NEXT to these fruits the Mangos are ranked by the natives. Nothing in nature presents a richer prospect, than a grove of mangos, at the season of that fruit : the tallness, and verdure of the trees, the dark hue of their leaves, variegated by all the different tints of the plentiful crop ; the number of birds of the most brilliant plumage, hopping among the branches, as if exulting in the plenty with which they are surrounded,

surrounded, forms a scene which seldom fails to attract the admiration of an European when he first travels through this country.

THE mango is not only a wholesome fruit, but extremely nutritive; and it is generally ate in the greatest quantity, and with most avidity by such as have resided long in the country. To a stranger its taste somewhat resembles turpentine; to which peculiarity custom soon reconciles him.

THE planting of a mango grove, here called a *Tope*, is executed with great care; it forms one of their important religious duties; and this is one happy instance in which the dictates of a complicated superstition coincides with those of morality. This majestic fruit-tree is the *Rhamnus Mangifera Indica* of Rumphius; It assumes the appearance of an oak, but is more grateful here, since it affords a thicker shade. The fruit is oblong, about the size of a goose's egg, and, when ripe, is of a red and yellow colour. It is made into various prepared dishes; as a pickle it is frequently sent to Europe; in India it is reckoned the most delicious of all fruit, and is preferred in the hot season, to any other.

THE Pomelo succeeds the mango as the season advances; it is of superior size; almost equally beautiful; but falls far short in its richness of taste and nutritive qualities. This fruit contains a large quantity of a very pleasant subacid juice, which, during the heat

heat of the day, has a cooling effect without injuring the stomach, though taken almost in any quantity. These fruits make a frequent and very respectable appearance at our deserts, and when it is said that they are perfectly innocent, much more is affirmed than can justly be done of many a fine object which here stimulate the avidity of the epicure.

THE Water-melon grows here to a size which renders it peculiarly ornamental to a desert table ; it is, however, neither a rich nor a nutritious fruit ; but may be ate with safety. When to the foregoing the Pomegranate, Custard-apple, Guava, Peach, and an endless variety of other productions of the orchard are added, the table is completely covered, and seems to groan under the profuse load with which it is attired. The quantity both of meat and fruit, produced on the tables at Calcutta, rather resembles a fortnight's supply of provisions than a meal for the company—A circumstance which, however suitable to our notions of splendour, certainly diminishes the elegance of our entertainments : In England, if I mistake not, it would be regarded as a characteristic of vulgarity.

THE cumbersome variety displayed at European tables seems a compliance with the ideas of the natives regarding hospitality. The number of dishes and fruits at the imperial table, mentioned in the *Ayeen Acbery*, exceeds all belief. In describing the private life of Acber, the most abstemious of all men, we are surprised to meet with such a tedious and laboured

boured detail of culinary regulations; every branch of which seems to have been under the management of a particular corps enumerated on the establishment of the army.

By such splendid festivity are the evenings of the Europeans in Bengal exhilarated, after the lassitude, fatigue, and debility unavoidably experienced during the day, in a climate, where the heat and moisture are overpowering, and oppressive, even to the natives themselves. It is with pleasure, however, I can add, that excess and intemperance are much more seldom witnessed than in Europe, and even than they were here, when the rude extravagances of social intercourse had not yet given way to more correct and elegant manners, and when persons of higher rank, and better education, had not yet begun to make a part of every company. If Bengal, and particularly Calcutta, are deemed less fatal to European constitutions than formerly, this must rather be ascribed to a reformation in the manners of the people, than any melioration of the climate. The first settlers, not only of the English, but of every other European nation, were men of bold and adventurous characters, but in general of mean birth and narrow education: for a while, till the importance of these possessions was better understood, they were followed by others of a similar description, whom neither experience nor reflection had taught the fatal consequences of dissipation in a warm climate. Whoever in these times, transgresses the bounds of moderation, must do it with  
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a full conviction of its impropriety, as well as against the influence of example ; and ought therefore to submit to receive lessons of wisdom, in the only way by which to *him*, they can be taught, by the admonitions of pain, and the dangers of disease,

THE HINDOO METHOD OF CULTIVATING THE SUGAR  
CANE.

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*Berhampore, Oct. 1797.*

DR. ROXBURGH, whose pursuits after botanical knowledge are now so well known, has given an ample account of this branch of Indian husbandry; and in the district where he resided little can be added to his remarks in elucidating the present practice.

“ AMONG the natives of India, he observes, the transitions from one stage of improvement to another are so exceedingly flow, as scarce to deserve the name, except it be the few who have benefited by the example of Europeans. They naturally possess a strong disinclination to depart from the beaten path established from time immemorial; however, when they see a certain prospect of gain, with little additional trouble, they have frequently been known

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to adopt our practices. We ourselves ought now generally to keep in view, and to instil into ~~their~~ minds this maxim, that every new proposition, merely on account of its novelty, must not be rejected, otherwise our knowledge would no longer be progressive, and every kind of improvement must cease.

“ At a period, like the present, when the importation of East India has become so much an object of importance to Britain, in consequence of the present state of some of the best of the West India sugar islands, every enquiry that may tend to open new sources from whence that wholesome commodity may be procured, at the cheapest rate, is of national importance.

“ I believe there are few districts in the Company's extensive dominions where there will not be found large tracts of land fit for the culture of the sugar cane: yet I know, from experience, the introduction of a new branch of agriculture, among the natives, to be attended with infinite trouble; therefore, where we find a province or district, in which the culture of the cane, and the working of sugar has been in practice from time immemorial, there we may expect, without much exertion, to be able to encrease the culture, and improve, if necessary, the quality.

IN the northern provinces, as well as in Bengal, Codapah, &c. large quantities of sugar and jagary are made; it is only in the Rajamundry and Gahjam districts of these northern parts, where the cane is cultivated for making sugars. I will confine my observations to the first, where I have resided between ten and eleven years.

THIS branch of agriculture, in the above-mentioned Sircar, is chiefly carried on in the Peddapore, and Pettapore, along the banks of the Elyseram river, which, though small, has a constant flow of water in it the whole year round, sufficiently large, not only to water the sugar plantations during the dryest seasons, but also a great variety of other productions; such as paddy, ginger, turmeric, yams, chillies. This stream of water during the dryest season, renders the lands adjoining, I presume, more fertile than almost any other in India, and particularly fit for the growth of the sugar cane.

IN these two Zemindaries, from 350 to 700 *Vissums*; or from 700 to 1400 acres of land, (the *Vissum* being two acres,) is annually employed for rearing the sugar cane, more or less, according to the demand for sugar: for they could, and would with pleasure, if they were certain of a market, grow and manufacture more than ten times the usual quantity. It is very profitable; and there is abundance of very proper land; all they want is a certain market for their sugar.

BESIDES the above-mentioned, a third more may be made on the Delta of the Godavery.

FROM the same spot they do not attempt to raise a second crop, oftener than every third or fourth year. The cane impoverishes it so much, that it must rest, or be employed during the two or three intermediate years, for the growth of such plants as are found to improve the soil, of which the Indian farmer is a perfect judge. They find the leguminous tribe the best for that purpose.

THE method of cultivating the cane, and manufacturing the sugar by the natives, hereabouts, is like all their other works, exceedingly simple. The whole apparatus, a few pair of bullocks excepted, does not amount to more than fifteen or twenty pagodas : as many thousand pounds is generally, I believe, necessary to set out the West India planter.

THE soil that suits the cane best, in this climate, is a rich vegetable earth, which, on exposure to the air, crumbles down into a very fine mould : it is also necessary for it to be of such a level, as allows it to be watered from the river, by simply damming it up, which almost the whole land adjoining to this river admits of, and yet so high, as to be easily drained during heavy rains.

SUCH a soil, and in such a situation, having been well meliorated, by various crops of leguminous plants,

plants, or fallowing for two or three years, is slightly manured, or has had cattle pent upon it. A favourite manure with the Hindoo farmer, is the rotten straw of the green and black peffaloo. During the months of April and May, it is repeatedly stirred with the common Hindoo plough, which soon brings this rich loose soil into very excellent order. About the end of May or beginning of June, the rains usually set in, by frequent heavy showers. Now is the time to plant the cane : but should the rains hold back, the prepared field is watered by flooding from the river, and when perfectly wet like soft mud, whether from the rain, or from the river, the cane is planted.

THE method is most simple : labourers with baskets, of the cuttings, with one or two joints each, arrange themselves along one side of the field ; they walk side by side, in as straight a line, as their eye or judgement enables them, dropping the sets at the distance of about eighteen inches in the rows, and four feet asunder from row to row : other labourers follow, and with the foot press the set about two inches into the soft mud-like soil : this with a sweep or two with the sole of the foot, they most easily and readily cover : nothing more is done. If the weather is moderately showery, till the young shoots are some two or three inches high, the earth is then loosened a few inches around them, with a small weeding iron, something like a carpenter's chisel : should the season prove dry, the field is occasionally watered from

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the river, continuing to weed, and to keep the earth loose about the stools.

IN August, two or three months from the time of planting, small trenches are cut through the field, at short distances, and so contrived as to drain off the water, should the season prove too wet for the canes, which is frequently the case, and would render their juices weak and unprofitable: the farmer, therefore, never fails to have his field plentifully and judiciously intersected with drains, while the cane is small, and before the time of the violent rains. Should the season prove too dry, these drains serve to conduct the water from the river, through the field, and also to carry off what does not soak into the earth in a few hours: for, say they, if water is permitted to remain upon the field for a greater length of time, the cane would suffer by it, so that they reckon these drains indispensibly necessary; and on their being well contrived depends, in a great measure, their future hopes of profit. Immediately after the field is trenched, the canes are all propped; this is an operation I do not remember to have seen mentioned by any writer on this subject, and is, perhaps, peculiar to these parts. It is done as follows:

THE canes are now about three feet high, and generally from three to six from each set that has taken root, and from what we may call the stool; the lower leaves of each cane are first carefully wrapt up round it, so as to cover it completely in every part,

A small strong bamboo, eight or ten feet long, is then stuck into the earth in the middle of each stool, and the canes are tied to it: this secures them in an erect position, and gives the air free access round every part. As the canes advance in size, they continue wrapping them round with the lower leaves, as they begin to wither, and to tie them to the prop bamboos higher up, during which time, if the weather is wet, they keep the trenches open; and if a drought prevails, they water them occasionally from the river, cleaning and loosening the ground every five or six weeks. Tying the leaves so carefully round the cane, they say, prevents them from cracking and splitting with the sun, helps to render the juice richer, and prevents their branching out round the sides: it is certain that you never see a branchy cane here.

IN January and February, the canes are ready to cut, which is about nine months from the time of planting; of course I need not describe it. Their height when standing in the field, will now be from eight to ten feet, foliage included; and the naked cane from an inch to an inch and a quarter in diameter.

A mill or two, or even more, according to the size of the field, is erected, when wanted, in the open air; generally under the shade of large mango trees, of which there are great abundance hereabouts. The mill is small; exceedingly simple, and at the same

same time efficacious. The juice as fast as expressed, is received into common earthen pots, strained and put into boilers, which are, in general, of an oval form, composed of ill made thick plates, of country iron, rivetted.

THESE boilers hold from eighty to one hundred gallons ; in each they put from twenty-four to thirty gallons of the strained juice : the boiler is placed over a draft furnace, which makes the fire burn with great violence, being supplied with a strong draught of air through a large subterranean passage, which also serves for an ash-pit. At first the fire is moderate, but as the scum is taken off, 'a point they are not very nice about in these parts, as they look to quantity more than quality, the fire is by degrees increased, so as to make the liquor boil very smartly ; nothing whatever is added to make the scum to rise, or the sugar to train, except when the planter wants a small quantity for his own or a friend's use ; in this case he adds ten or twelve pints of sweet milk to every twenty-four or thirty gallons, or each boiler of juice, which no doubt improves the quality of the sugar : the scum with this addition, comes up more abundantly, and is more carefully removed.

THE liquor is never here removed into a second boiler, but is in the same boiled down to a proper consistence, which they guess by the eye, and by the touch : the fire is then withdrawn, and in the same vessel allowed to cool a little. When it becomes pretty

pretty thick, they stir it about with stirring sticks, till it begins to take the form of sugar; it is then taken out and put upon mats, made of the leaves of the palmira tree, (*Borassus flubelliformis*), when the stirring is continued till it is cold: it is then put up in pots, baskets, &c. till a merchant appears to buy it.

THE Hindoo name of this sugar is Pansadurry; its colour is fairer than most of the raw sugars made in our West India islands; but it is of a clammy unctuous nature, absorbing much moisture in wet weather, sometimes sufficient to melt a great deal of it, if not carefully stowed in some dry place, where smoke has access to it.

MANY of the planters prefer that sort of sugar which they call Bellum, and Europeans Jagary; because it keeps well during the wet weather if laid up in a dry place. It generally bears a lower price; yet, they say, this disadvantage is often overbalanced by their being able to keep it with only a trifling wastage, till a market occurs, for the farmer has often to wait for a market for his sugar; besides canes of inferior quality answer for jagary, when unfit for sugar.

THE process for making jagary differs from those above described, in having a quantity of quick lime thrown into the boiler with the cane juice, about a spoonful and a half for every six or seven gallons of  
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the juice. Here they do not remove the scum, but let it mix with the liquor; and when of a proper consistence, about four or five ounces of Gengeley (oil of *Sesamum orientale*), are added to each boiler of liquor, now ready to be removed from the fire; these are well mixed, and then poured into shallow pits dug in the ground. They are generally about three feet long, and a half broad, and three inches deep, with a mat spread at the bottom, which is slightly strewed with quick lime. In a short time the liquor incorporates into a thick solid mass; these large cakes, they wrap up in dry leaves, and lay by for sale.

THEIR jagary is of a darker colour, than the sugar, and contains more impurities, owing to the careless manner they prepare it, by allowing all the scum to incorporate with the liquor.

THE half vissum, or one acre of sugar cane, in a tolerable season, yields about ten candy of sugar, or rather more, if made into jagary: each candy weighs about 500 lb. and is worth on the spot from sixteen to twenty-four rupees. In the West Indies, so far as my information goes, the cane yields from fourteen to twenty hundred weight of their raw sugar, worth on the island about 20l. of their currency. Here the produce is more than double; but on account of its inferior quality, and the low price it bears on the spot, the produce does not yield a great deal more money than in the West Indies. However, as the  
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labour is incomparably cheaper, the Indian planter must make much larger profits.

THE situation of all the lands hereabouts is exactly alike; being in the middle of an extensive plain adjoining the river: the soil in all is also much alike, so that the produce is nearly equal in all, when no unfavourable circumstances happen. The same result is further established by the quantity of sugar a measure of juice will yield. Here it is almost always, except in a very rainy season, or in lodged or wormy canes, about one sixth part; or six pounds of juice yield one pound of sugar. In Jamaica, Mr Beckford says, that on an average eighteen hundred gallons of juice may be reckoned to yield an hoghead of sugar, or sixteen hundred weight, that is, one of sugar to eight of juice. This proves our juice to be one fourth richer than theirs.

FROM the above calculation, it is evident that all the lands in this neighbourhood are better adapted to this culture than the lands of Jamaica; for here they not only yield a larger crop of canes, but the juice is also richer: and were our planters here to bring the molasses into account, employed in the West Indies for the distillation of rum, their profits would be still greater. At present this refuse is given to cattle, or carried away by the labourers for whatever they think proper. It is thus productive of more real benefit, than if converted into ardent spirits. The natives in other parts of India are, how-

ever, well acquainted with the method of making both rum and arrack, nor have they learned this pernicious process from Europeans, as some have supposed.

IN this country the canes, while growing, are subject to fewer accidents than in the West Indies. I will mention them briefly.

1. A very hot season is the worst; it injures the canes greatly, rendering them of a reddish colour, yielding a poor unprofitable juice: here they reckon the small, heavy, pale yellow cane the best.

2. STORMS, unless they are very violent, do no great harm, because the canes are propped; however, if they are once laid down, they become branchy and thin, yielding a poor, watery juice, and to this they are sometimes liable.

3. THE worm is another evil which generally visits them every few years: a beetle deposits its egg in the young cane; the grubs of these remain in the plant, living on its medullary parts, till they are metamorphosed into the pupa state. Sometimes this evil is so great as to injure a sixth or an eighth part of a field; but what is worse, the disease is commonly general where it happens, few fields escaping.

4. THE flower is the last accident they reckon upon; although it scarcely deserves the name; for it rarely happens, and never but to a very small portion of some few fields: Those canes that flower have very little juice left; and it is by no means so sweet as the rest.

THE lands occupied with the sugar cane in the Zemindaries of Peddapore, and Pettapore, exclusive of those islands formed by the mouths of the Godavery, amount to five hundred and fifty vissums, or eleven hundred acres, and their annual produce is forty-four hundred weight per acre: their whole produce will therefore be twenty-seven hundred hogheads of eighteen hundred weight each, or about one fourth part of the produce of the island of Jamaica. It is acknowledged by all, that this quantity might be increased to any extent, with advantage to the zemindar, the farmer, and government. This observation applies with double force to the upper provinces on the Ganges, as far as Rohilcund, where the sugar lands are of indefinite extent; and where with a culture infinitely less perfect than that above described, great quantities of sugar and jagary are already made by the natives. All that seems necessary in these immense tracts, is to open a market to the Ryut, and secure to him a strict agreement to his lease with the Zemindar.

TRANSGRESSIONS in this point are the great bar to Indian husbandry; for in a good season the Zemindar

dar raises his demands, and makes the farmers of all denominations pay probably a fourth more than the rent agreed on. Custom has rendered this iniquity common, and the farmer has no idea of obtaining redress of an evil, which to him appears as irremediable as the ravages of the elements.

OF THE CULTURE OF THE POTATOE.

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*Berhampore, Oct. 1797.*

MUCH order or arrangement cannot be expected in treating a subject, which you are compelled to examine, not methodically, but by piece-meal, as opportunity offers. You have not the choice what subjects you are to enquire into this season, or what to investigate the next; on the contrary, if examination is delayed, while you are on the spot, the opportunity is perhaps for ever lost; and the next person you apply to for information, may, perhaps, prove more ignorant, than you are yourself.

IN passing through these provinces with the army, during a period of five years, I have endeavoured, as much as possible, to connect together whatever observations I could make, relating to the rural economy of the farmer, and produce of the soil. Without  
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shelter or a fixed residence, this could not always be effected.—A palankeen and boat, or even a bungalow in military cantonments, is not a situation favourable to an elegant arrangement of your subject, or much polish of stile in treating it.

IN this district, we have first to notice the Culture of Potatoes, which has been introduced into Bengal; and apparently with the most beneficial effect: It is a comfortable circumstance, that superstition in Hindostan, all-powerful as it is, does not shut up every avenue to improvement, or preclude the people from every advantage to be derived from the superior attainments of Europeans, in industry, art, and science. No prejudice prevents the Hindoo from the culture and use of the potatoe: the most useful and nutritive of all vegetables in every country where the growing of it is fully understood. If the natives here have hitherto derived but small benefit from this plant, it is because the culture has not become universal, nor has the method of preserving it been so much attended to as in Europe.

THE soil of Bengal, and the long continuance of dry weather, may, perhaps, prevent the growth of the potatoe to the extent necessary for the food of the common people.—In that case, the good effects of its introduction may not be so generally felt as they have been in Europe.

THE quantity, however, procured by Europeans, almost at every season of the year, clearly shows, that these obstacles are not altogether insuperable. The potatoe, at present almost universally makes a dish at European tables : it is well dressed, and little inferior to what we have in England : in size, indeed, it is smaller, and the crop is less abundant ; hence, in the Bazar, rice is, in general, a cheaper food. The natives show a willingness to use it on all occasions, where it can be as easily procured, as other food : and there remains not a doubt, if ever the potatoe shall become cheaper than the rice, that it will be generally preferred.

A DRY season is unfavourable to the rice crop ; but is certainly the best for this vegetable : it would appear, then, that nature points out the one crop as a substitute, when the other fails. In order to second her views, however, a certain quantity of land in every farm should be planted with the potatoe ; for nothing short of this precaution will ever secure an adequate support during a failure of the usual crop to so numerous a people, and so improvident as the Hindoos. The encouragement, and sometimes the interference, of government might be necessary, at first, to establish the practice : but if it once were introduced, the tenaciousness of the Hindoos to their ordinary routine of culture, would prove a full security for its preservation. Some years ago, a gentleman distributed two boat-loads as seed to the natives in the neighbourhood



bourhood of Cawnpore, and the crop has gradually increased ever since.

THE abatements of rent, unavoidable in years of scarcity, and the no less inevitable expence of purchasing rice, and selling it at a low price to preserve the lives of the poor, fall so heavily upon government, that the introduction of the potatoe into every farm, by the interference of authority, seems to be equally a dictate of economy and prudence, as of common humanity.

At Madras, and some other parts of the Coromandel coast, I am informed, that the benevolent exertions of some well disposed persons, have introduced the bread-fruit tree : if this has succeeded, and in some degree it has, it was accomplished by the projectors of it, on views of advantage far less certain or immediate, than the introduction of the potatoe.

It frequently is not the discoveries which yield the most substantial benefit to human society, that make the most splendid figure in the annals of history.

THE man who first introduced into Europe the use and culture of the potatoe, has conferred a real and permanent benefit upon the poor, which, in every country, comprehends nine-tenths of mankind. He has relieved the importunate calls of hunger in many a family ; and in the inside of the cottage, he has gladdened many a countenance, that, before his day, was  
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fullen with hunger, or shrivelled with want. This person, though unrecorded in the annals of Fame, bought, in simple justice, to occupy one of the first seats in her temple.—This honour is said to be due to that adventurous but ill-requited statesman Sir Walter Raleigh.

It would, perhaps, be too sanguine to expect, that a vegetable, not perfectly congenial to the climate of Hindostan, should ever be turned to so much account in feeding hogs, poultry, and cattle, as it is in Britain and Ireland: but if, by our example and judicious encouragement, the potatoe shall become of as universal use among the Hindoos, as it is in these countries, the Europeans of the present age will have the honour of making some atonement for the mischiefs and devastations committed by their ancestors for two centuries in America.—Amidst so many changes of manners, we may at least hope for a period, when virtue and humanity shall be as resolute and persevering in their aim, as avarice or cruelty.

So little attention has hitherto been paid to the melioration of the condition of the natives, that you cannot even attempt it, without incurring the ridicule of a great proportion of the Europeans in India. They tell you, that the most trivial customs of the people are as immutable as the laws of the Medes and Persians; and nothing short of fatuity could induce any person to attempt a change. This is a plausible excuse for the universal neglect of this important sub-

ject; and is urged by some as a plea for the omission of what conscience tells them is a duty. Europeans, in general, visit this country for the advancement of their own fortunes; an object which they pursue, as at first, from necessity, but afterwards, from habit. If personal advantage becomes the great rule of action, it is a convenient principle for many, yet, if established, would vindicate every act of oppression committed amongst mankind in every age.

THE uncertainty of a rice crop, as the only support of a numerous people, is sufficient of itself to justify every attempt, however unpromising, to introduce other staple articles to come in aid of it in times of scarcity. A grain which depends upon the quantity of rain, and on the number of inches to which the stream rises on the Ganges, experience has often proved to be an awful contingent to hang the lives of millions of our fellow-creatures on. If a stimulus to their indolence, or even a small violation of some of their customs, could rescue them from the danger, the means would be as completely sanctified by the end, as the evil would be overbalanced by the advantage.

SHOULD the culture of the potatoe never become so general in Bengal, as to answer the intended purpose, its place might still be supplied by the yam, or sweet potatoe, a vegetable resembling it in taste, but far larger in size, and, in this country, more easily raised. It has been cultivated and used by the natives

to a certain degree, I believe from time immemorial : the cultivation of this plant to a greater extent might thwart the indolence, but could violate no religious prejudice of the Hindoo. Such precautions in his behalf are the more necessary ; because in all his conduct, he betrays a want of foresight, and indifference to futurity, that totally disqualify him from providing in any degree against famine, which has ever been the great scourge of India.

THAT the resources promised by the bread-fruit tree will prove equal to what might be expected, either from the potatoe or the yam, is more than problematical. The planting of a tree, and the care of its preservation till it become productive, there is reason to believe, is beyond the usual effort of foresight possessed by this improvident race. This neglect, however, must be imputed to themselves ; it cannot derogate from the honour of those benevolent persons, who have attempted to alleviate one of the most urgent of their distresses.

## DESCRIPTION

## DESCRIPTION OF THE ISLAND OF COSSIMBÁZAR.

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*Berhampore, Oct. 1797.*

You hardly any where view the cultivation and populoufness of India more advantageously than in this beautiful island, which is furrounded by the Hoogly, Cossimbazar river, and the Ganges. While the Nabobs of Bengal continued independent princes, or were nominally subjected to the court of Delhi, they resided chiefly on this island, at least during the present century. At Moreshedabad, the capital, the Durbar was held, and the English resident had a kind of fortress assigned him, and his attendant, about four miles distant, near the populous village which bears the same name with the island. It is furrounded by a stone wall which still remains, and the house within affords elegant accommodations for the commercial resident of the Company.

THIS

THIS gentleman has the superintendence of a considerable manufacture of silk, for which Cossimbazar has long been famous. The place is also noted for its stockings; which are all knitted with wires, and are esteemed the best in Bengal. The price is from twenty to thirty-five rupees the *corge*, which consists of twenty pairs.

THIS village, according to Tavernier\*, sends abroad every year twenty two thousand bales of silk, weighing each 100 lbs. of silk; making in all 2,200,000 pounds, of sixteen ounces each. This is probably an exaggeration, yet the quantity of silk consumed by the natives in carpets, sattins, and other stuffs, must have been very great.

It would certainly tend greatly to increase the produce of labour, were stocking frames introduced, and the natives taught to use them. Some enterprising European may hereafter enrich himself by this measure, and at the same time benefit the country. For the stockings manufactured after the present mode cannot contend with the British either in quality or price; this is so palpably the case, that the superior classes of Europeans seldom wear any that are manufactured in India. Some Europeans allege that the stockings manufactured in India are more soft and elastic than those knitted in a frame; this however is not the general opinion.

IN

\* Travels in India Part. II. p. 126.

In this branch of the cotton trade, as well as fustians, and many articles of the thicker kind, the natives of Bengal are already completely outdone by their rivals in Britain, though only in the infancy of their career. Some persons here, of no inferior understanding, allege that the same thing will soon happen in every article whatever manufactured of cotton; but by the major part this is regarded as a sort of rebellion against antient opinions, which nothing but an overweening conceit of our own ingenuity could suggest.

THE fact as it stands at present, undeniably is, that the retail price of many articles in the cotton trade, is higher in Calcutta than at either Glasgow or Manchester: and the boast of the manufacturers of these towns, that they will soon be able to sell their goods in Bengal, is therefore not altogether void of plausibility.

THERE are many causes which may long prevent any rivalry of the Indian finest muslins. The low price of labour, and the extreme delicacy of touch, which the slender Hindoo obtains, by means of his temperate habits, are among the principal. The finest muslins are not now manufactured: when Ali Beg the ambassador from Persia returned from India, he presented Shah Seffi with a cocoa nut set with pearls, which had inclosed in it a turban of sixty cubits of muslin so fine that the cloth could scarcely be felt by the hand\*.

THE

\* Tavernier's Travels in India.

THE unhealthy state of the adjoining towns of Moreshedabad, Calcapore, and Cossimbazar, has of late been so alarming, that an enquiry was made into its cause by some medical gentleman on the spot. Among the natives, confined and damp huts, bad water, and defective clothing, certainly contribute to the malignancy of the fever and dysentery, by which so many hundreds of the poorer sort are swept away every autumn.

•EUROPEANS residing in these towns are by no means equally subject to these disorders. The Company has erected in their vicinity a regular cantonment capable of lodging two thousand European soldiers; which for spaciousness and elegance, are unequalled by any buildings of the same kind in Europe. The different erections of the Company for the accommodation of their troops, have cost several millions, and may be regarded as splendid instances of their economical principles giving way to the comfort of their army. The sums thus expended, laid out at the compound interest of this country would, at a determinate period not very remote, have equalled the national debt.

ABOUT twenty miles south of Cossimbazar lie the celebrated plains of Plassey, where Lord Clive at once revenged the cruelty of the Nabob Suraja Dowlah, and established the British power in Bengal. At this delightful spot the prince had an elegant villa, where he retired to enjoy the pleasures of the chase.



chace. Woods and jungle then covered those plains which are now beautified with rich crops of cotton and rice ; and the tiger has been compelled to retire from the approach of the husbandman, and to make room for the acquisition of his industry. The princes of Hindostan in many points seem to resemble the feudal monarchs in Europe : they are, however, more excusable in devoting a part of their territory to the diversion of hunting ; the game is much more abundant, and the sport afforded by the boar, the buffalo, or the tiger, is certainly more manly and interesting than the pursuit of the fox, or timid hare : yet for these, many thousand acres were laid waste in every country in Europe, by our semibarbarous ancestors.

Of the inferior kinds of game, the island of Cossimbazar, as indeed every part of India, is full : the hare, the deer, the partridge, and quail, with a vast number of birds far superior in beauty and variety to those of Europe, are found all along the banks of the Ganges. What is more remarkable, the aquatic birds of the colder climates are also abundant ; such as the goose, duck, pigeon, and snipe. At the slow rate you are obliged to travel in a budgerow, you may during the cold season, have your table plentifully supplied each day with the produce of your own labours, though not an expert sportsman.

FISH afford another supply for the table almost always attainable on the Ganges. They are here of many different kinds, and among fresh water fishes they certainly may be deemed very palatable as well as wholesome. Their plenty at some seasons is so great that they become the ordinary food of the poorest of the natives, who are said to incur diseases from too liberal indulgence. The smallest in size, some of which appear to be the fry of larger kinds, are all equally acceptable in a Currie, that standing dish in every native family. What is called the *cook-up*, in the jargon of the country, is often larger than a salmon; and the number taken in nets is often very great. The mango fish, so called from the fruit, which comes then in season, are the favourite dish at every European table during two months, while they are in roe, for they are then filled with a large roe or smelt, which the connoisseurs reckon a delicate morsel.

For several hundred miles the alligator and porpoises are seen tumbling in this large stream: and after the numbers that must be daily devoured by these voracious plunderers of the inferior tribes, a sufficient quantity still remains to reward the labours of the fishermen, who continually ply the river, either for the supply of the market, or of their own families. The alligator of the Ganges is from twenty to twenty-five feet long when at its full size. I have not observed that the populous island of Cosimbazar has attracted this hideous animal in greater

numbers than is found in other parts of the river : it is allowed, however, that he is extremely voracious of human food ; a repast to which he can be no stranger, from the number of dead bodies continually thrown into the river. A single fisherman in his canoe is not a match for the alligator : he flies at his approach : but as often as the monster is seen by a company in the same boat, he, in his turn, is obliged to retreat. The gurreal is a species of the crocodile still more hideous than the alligator.

So much has nature done for the fertile island of Cossimbazar ; and for once the natives have had spirit to second her views. The soil of this district is not only rich, but it is the best cultivated in this country : crops of every sort are luxuriant ; and Cossimbazar has obtained the name of the garden of Bengal, which itself has long had the appellation of the garden of India.

OF TRAVELLING IN A BUDGERROW ON THE GREAT RIVER,

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*Ganges, Dec. 1798.*

IN this part of India journies are most frequently performed by water; and by the assistance of the same class of boat-men that are employed in the conveyance of goods.

THE vessels used by Europeans for this purpose, are constructed with an air of elegance seldom aimed at in any other part of the world. If the affectation of splendour is generally the characteristic of men of low birth on the sudden attainment of wealth in every quarter, it is not surprising that it should sometimes appear here: it is natural to conceal a humble origin by pompous manners and a show of profusion.

THE travelling Budgerrow used on the Ganges is an instance of this affectation, the more excuseable here,

where every convenience is necessary to support the effects of the climate. These vessels are constructed with a large airy cabin, furrounded with venetian and canvas blinds : in each there is a suite of two or three apartments, which, with additional boats for baggage and servants, can accommodate a small family very comfortably for a considerable time.

THIS is indeed necessary, for slowness is the great objection to this mode of travelling: three months and a half are allowed a Budgerrow to travel from the presidency to the higher stations; and this allowance, large as it may appear, has sometimes been insufficient. The wind and the strong current of the Ganges at certain seasons, are insurmountable obstacles to expedition in travelling up the country; and if their time is limited, another mode of conveyance must be adopted.

HARDLY any part of the food of a Hindoo is common to him with an European: almost every article, therefore, must be provided before your journey commences. The Bazars furnish kids, fowls, eggs, rice, and milk; but it is not safe to trust that your supplies will be procured even where these articles are to be found. In many places the natives positively refuse to sell their goods to an European; and their reluctance is so remarkable, that I have seen a whole village shut up their shops, and the owners conceal themselves, on a report of a stranger coming to purchase from them. Wherever men find it their interest

est, they will, in general, be willing to sell: some violence or unfair dealing must have been the cause of this shyness of the Hindoos. Had they never been annoyed or defrauded, it is probable they never would have refused to sell their commodities.\*

ON a journey where the scenery is circumscribed, and the objects trivial or common, the exercise of patience, during a slow progress, may be difficult; but, on first travelling on the Ganges, that mind must be strangely constructed which cannot exercise this virtue. The first view presented to a stranger of this grand and venerable stream, the constant distributor of comfort to millions of his fellow-creatures, excuses with him, the simple natives for that excess of veneration with which they regard it. All that you have heard of the munificence of the Nile, or of the blessings conferred on America, by the large streams that pervade that country, is far outdone by this great parent of rivers.

It affords abundance of drink to the inhabitants of a country which would otherwise be parched in the hot season; the air from it cools and refreshes the country: during the rains, it overflows immense tracts, which are fertilized by its water, while it enables their cultivators to convey to market part of their produce. It thus administers by far the greater part of his comforts to the Hindoo when living, and furnishes a sacred receptacle for his body at his death.

THE natives of Hindostan have, for these reasons, venerated the Ganges to idolatry: A mixture of emotion, of surprize, pity, and regret, arises in the breast of an European, when he first beholds the aged Hindoos, with their white beards, stepping down its bank, to pay their evening devotions, and to bathe themselves in this hallowed river.

THIS custom, derived at first from simple gratitude, forms now a stated portion of that immense mass of superstition which priestcraft has entailed on the ignorant multitude.

FROM whatever source this ceremony at first arose, it is religiously and almost universally observed, not merely by those in the vicinity of the great river and its sacred branches, but also by many at a great distance, who, at certain seasons, either resort to its banks, or send for a portion of the purifying water for domestic ablution and other purposes.

The spiritual benefits that are supposed to be conveyed by the contact of this holy stream, I have not learned; its moral and physical effects are sufficiently apparent. In a hot climate cleanliness is of the utmost importance. Many of the natives anoint themselves with oil; and were this allowed to accumulate with dust and perspiration, they would soon become noisome to each other, and would certainly fall sacrifices to putrid diseases.

In this view, it is not unpleasing to observe the inhabitants of every village, as you pass along the river, repairing each morning and evening, to perform in the stream ~~this~~ necessary lustration.

WHILE the old men are busy at prayers and gesticulations, the women and children are equally anxious to purify their skin. In doing this they do not trust entirely to the virtues of the water; but take up sand and mud from the bottom, with which they rub their bodies as constantly as if they were in the act of clearing metal.

It is on these occasions that the women clear up their domestic utensils, which generally consist only of a few earthen and brazen pots: the latter they carry home as bright as gold, supported over the haunch by one arm, on the shoulder, or the head, according to the cast. This ceremony seems to be performed twice every day, and affords an idea of the cleanliness of the natives not unworthy of the imitation of those who deem themselves their superiors.

ANOTHER circumstance which meets the eye of a traveller, not so consistent with our ideas of delicacy, is the promiscuous intercourse of the sexes in these bathing parties. It must be remembered, however, that the natives go into the river with the whole of their usual dress, and consequently have no farther inducement to privacy, than on other occasions.

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Some reluctance at being seen by strangers, is plainly observable ; and it is amusing to remark the different degrees of confidence produced by age, marriage, personal attractions, or other circumstances. Some conceal themselves from the eye of Europeans, by remaining up to the chin in the water till they pass ; others by getting behind screens and pailings erected for the purpose ; behind these retreats they are seen spying the traveller with all the eagerness of curiosity that has been deemed peculiar to the sex : *Naturam licet furca expellas tamen usque recurrit.*

ONE melancholy circumstance cannot fail to obtrude itself upon the mind of him who travels on the branches of this river. From what cause does so great a portion of this fine country lie in all the wildness of savage nature ? Lord Cornwallis, in a letter to the Court of Directors, declares, that a great part of this country is a mere jungle ; and the same observation must occur to every one who has visited it. On some branches of the Ganges, you may travel for nearly a day without seeing one cultivated field, a house, or even a tree. We cannot follow out this idea, without recurring to some period of public rapine and devastation, of which it is evidently the consequence. Three Mahratta armies plundered this country for ten years previous to its coming under our protection ; and the old men speak of it with horror.

It is true, that were we to judge by the number of boats plying upon the river, or the number of people who, in some parts, resort to its banks, we might form an unfavourable idea of the population of these provinces. But the river is here the great highway leading to the capital from all the upper districts; and it is resorted to not merely for the purpose of travelling, but for commerce and religion: and if these circumstances are taken into account, the number of people upon the river falls short of what might be expected in a populous country. In China, the carrying trade and fishing, bring much greater numbers to the rivers of that country, than are any where seen upon the Ganges\*.

THE natives of Hindostan have probably never been blest with a good government: always the victims of the rapacity or ambition of some merciless tyrant, the gifts of nature seem to have been lavished upon them to no purpose, unless to prove the inefficacy of every other advantage, when counteracted by a blind and sanguinary despotism.

THE British power has now obtained a more decided ascendancy among them, than has ever been possessed by any nation: and the effect of this has been the prevention of internal war, by

VOL. II. I . which

\* Anderson's account of the Embassy, passim.

which many of the evils of bad government will in future be done away. The time is approaching, when the exertions of a moderate government will be felt even in the midst of the regions of despotism ; a period when Asia, which never framed a rational government for itself, will receive one from Europe ; and when those arts, which originated in this country, and that knowledge, which it once communicated, shall again return with increase into its bosom.

SUCH a tendency is discernible in the British government of India ; not from any chimerical notions of liberty being likely to prevail here ; such a circumstance is happily beyond the reach of probability. Here the metaphysical jargon of the modern school can never be made intelligible. The conjecture is hazarded on the moderation, humanity, and good sense which still distinguishes the British character in this part of the world.

HAPPILY such suppositions are not merely the offspring of good nature : they have been for some years past realized, at least in part. None of those irregularities have of late appeared, either in the civil or military government of India, which were wont to characterize former administrations. That government is now an object of ambition to the first characters in the nation : men of the highest rank, and of the most independent fortunes, may here

here obtain honour, by being useful to their country: an acquisition which cannot be attained in the crooked paths of corruption, or by the more audacious acts of rapacity. .

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THE ROADS, AND THE MANNER OF TRAVELLING BY  
LAND.

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*Plassey, Dec. 1797.*

I ENDEAVOURED lately to give some idea of the inland navigation of this country, a part of the world so abundantly supplied by natural resources, as to supersede, in a great measure, the contrivance of art. In a province so level as Bengal, canals, were they necessary, could be furnished almost as easily as roads: for the latter there is hardly any materials, except pounded brick; which is generally overlaid upon a stratum of the same materials, in their unbroken state. In the upper country there are, indeed, quarries of free-stone, and whin rock, but the carriage of these materials to so great a distance, implies an exertion and an expence far exceeding the present circumstances of the government.

ONE of the Emperors of the Mahommedan race, planted trees, dug wells, and built inns at convenient stages from his capital, to the distant parts of his empire. Some remains of his princely undertakings are still to be discerned in those Choultries and Serais, whose naked walls or ruinous vestiges are still here and there to be seen.

CARAVANSERAIS in the east never implied the idea which we attach to an inn : they consist merely of an empty house, where you are permitted to lodge, and are endowed with a certain sum to keep them in repair. All the accommodation in them is of the traveller's own procuring : his bed, provisions, and kitchen utensils are carried along with him ; and in a country so much infested by the tiger, and by wandering robbers, even the protection of a house is deemed no small comfort. Forster is the only European who contented himself with the simple fare of the native caravanserais. When this inn is not to be had, the disconsolate traveller shelters himself from the noon-day sun under the shade of some tree ; under the same roof he also turns aside to avoid those sudden and tremendous storms of rain, hail and thunder, which prevail during the hot months of April and May.

- THE Hon. Company, since their attainment of such a vast territorial possession, have completed a road from their capital to Benares and Chunar. This has been done principally with a view of expediting  
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their military movements ; but is at the same time a great convenience to such as travel by land to the upper stations. Some of the more remote of these are above one thousand miles from Calcutta, and may be travelled to in nine or ten days. To accomplish this, however, bearers must be regularly laid at the different stages, so that no delay may be occasioned by providing them. This precaution is always necessary before you undertake any journey whatever ; and it is done with great facility, as the terms are generally settled by government, and the number of bearers is always greater than can regularly find employment.

It is surprising with what ease a journey of thirty or forty miles is performed here : in the hot season you generally set out in the evening, and arrive before breakfast. If your time do not permit you to rest, the route is continued during the whole day, at about four miles an hour ; nor is this insupportable ; as you may sleep with some comfort in such conveyance.

THE number of bearers, coolies, and other servants necessary on a journey in this country, is not easily credited by a European. Their number is generally equal, sometimes greater than that of the miles you travel : hence, in performing the journey just mentioned, in the specified time, the service of more than a thousand natives is required. Thus the cheapness of labour in Bengal, is almost  
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in every instance overbalanced by the number of hands, which it is absolutely necessary to employ. In England, the same distance may be travelled in a coach and fix, with a splendid retinue, in a shorter space, and at a smaller charge.

SHORTER excursions are performed on horseback, or in a carriage : this must, however, be done either before sun-rise, or in the evening. Heat, combined with moisture, as it is in this country, has effects irresistibly destructive to an European constitution.

THE horses used by Europeans in Bengal, are either of Persian or Arabian extraction ; and consequently sell at a high price. A good horse of this breed cannot be had under eight hundred rupees, and from that sum the price rises sometimes to two thousand. They are well formed, light, and spirited ; but seem not in this climate to be capable of great fatigue. Their temper seems also to be injured, as well as the hardiness of their constitution, by change of country : some of them, from being tame and gentle, become so remarkably vicious as to prove totally unfit for use.

IN the Ayeen Acbery six different kinds of horses are specified, that comprised the immense body of Mogul cavalry : in each class, the pay corresponded to the supposed qualities of the horse, and the Persian horse stands in the first class ; and the pay of a single trooper is stated at ninety rupees per month, while



while that of the Tazy and Jungley are as low as fifteen and ten rupees. These last are the country-bred horses, and were never in high estimation, for immense numbers were then, and still continue to be imported from Cabul and Candahar.

THE native Bengalee horse is thin, ill shaped, and every way a contemptible animal: no doubt the meagre state in which they are kept adds greatly to their deformity. In their best state they never equal the Welsh or Highland poney, either in figure or usefulness. Mounted by the poorer natives, and woefully comparifoned as they commonly are, they seem only fit for the retinue of Don Quixote. As in this country the use of horses in a team is totally unknown, the worthlessness of the horse is little to be regretted; but it is singular to observe that they employ the oxen for all the purposes of agriculture, in a part of the world where his flesh is not an article of food. One would suppose that in Europe, where the carcase is turned to such good account, after their labour is over, that the balance would be entirely in their favour; yet in the late agricultural reports, the reverse seems established. Custom, perhaps, has had more influence than reason in determining this matter in every quarter of the globe.

THE Secretary and Surveyor to the Board of Agriculture, whose knowledge of husbandry is at once accurate and extensive, have both, if I mistake not, strongly recommended oxen, in certain circumstances,

stances, for the common labours of husbandry ; and they have been employed on his Majesty's extensive farms near Windsor. What confirmation does this practice receive, when we consider that in the vast and populous peninsula of Hindostan, they only use bullocks, where their flesh brings almost nothing as an article of food, and their hide very little either as a material of manufactures, or an article of commerce !

PERHAPS no writers have contributed more largely, than these two gentlemen, to diffuse among farmers a practical knowledge of their profession. Had providence afforded either of them an opportunity of travelling over this country, their remarks would probably have conveyed more useful information, on the state of its rural economy, than all that has yet been written : and that this has not been the case, is the more to be regretted, because, if ever a judicious and equitable system of regulations, for the government of this country, falls to its lot, it must be framed in Europe, and from thence also must proceed a controul over its execution.

NOTHING can exceed the general indifference, and ignorance of Europeans upon this important subject : they commonly embark for India at an early period of life, when they could have no knowledge of a matter so complex as agriculture. Their own particular profession, and the unavoidable dis-

sipation of society, prevent them ever after from turning their thoughts to it. Knowledge is, besides, not so easily attained here, as in Britain, where the weather permits you to travel at all times, and to converse with every class of people. Here an European can go abroad with safety only at certain seasons; and though he has learned the language so far as to converse on domestic matters, and such as relate to his own profession, yet a new dialect, and a new set of phrases are necessary, to talk with a peasant. After much exertion, expence of time, and labour, and by using an interpreter, you may deem yourself fortunate indeed, if you can procure the particulars of a farm as accurately even as those given by Mr Arthur Young, after a short conversation with an English farmer.

To these causes, united with that indolence and lassitude, unavoidable in this climate, we must impute the ignorance which still prevails in Europe, respecting the agriculture of the Hindoos. Europeans here do not understand it; and consequently cannot communicate it to others. After remaining in Bengal for thirty years, you may meet with many who are incapable of even giving the names of the common grain, or knowing for what purpose it is raised.

## OF THE CART AND THE PLOUGH.

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*Kiffengunge, Oct. 1797.*

THE cattle principally used for the team in Bengal are bullocks. The simplicity of means employed to accomplish the end so prevalent in every operation performed by Asiatics, is nowhere more conspicuous than in the carts, harnesses, and draft-waggon<sup>s</sup> of the Bengalese. The most common vehicle among the peasants is a Hackery, or two wheeled cart, drawn by two bullocks : the wheels, not three feet in diameter, are constructed in a clumsy and awkward manner : the body of the carriage consists of two bamboos, united by a few bars of the same materials ; approaching each other the whole length of the machine, till they meet at a point between the necks of the cattle ; where they are supported by a bar, projecting sideways over the shoulders of both. By this the poor animals are often galled in a most shocking manner :

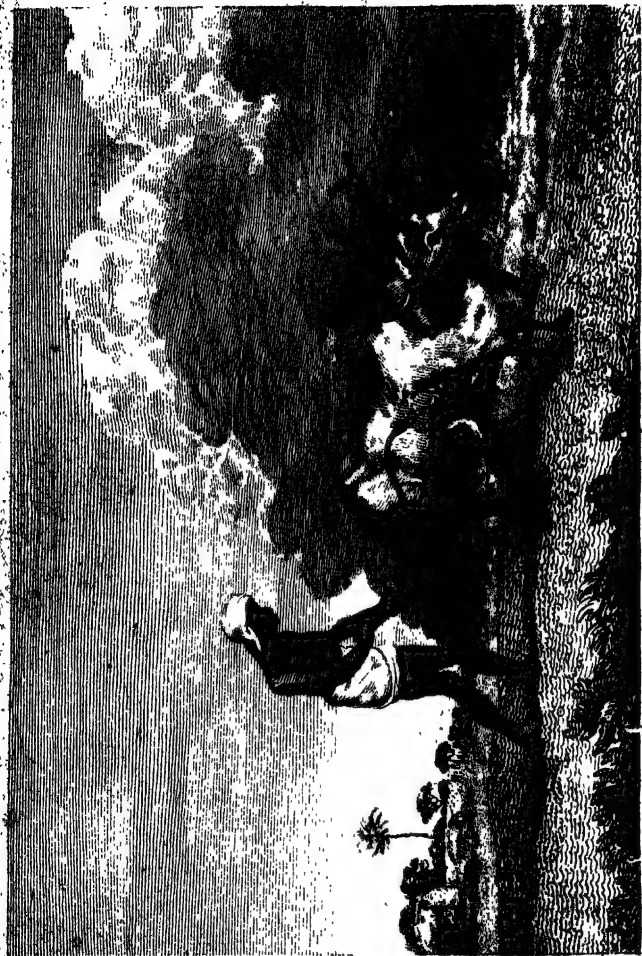
manner: a suppuration frequently takes place from the friction, which is not, perhaps, perfectly cured during the whole life of the miserable animal; for, besides his being condemned to daily toil, he is no sooner relieved from the yoke in the evening, than the crows set upon him, to gratify their voracity by renewing, or rather perpetuating his torments.

THE view of a Bengalee dray-man, urging on his way-worn vehicle, is closely associated with the idea of toil and misery in the mind of every European; and this impression is greatly strengthened by the unsufferable stridor of a dry axle-tree continually screeching with the nave of a still drier wheel: nor can you by any argument, prevail upon the listless owner, to save his ears, his cattle, or his cart, by lubricating it with oil. Neither his industry, his invention, nor his purse would admit of this—even though you could remove what is generally insurmountable, his veneration for ancient usage: if his forefathers drove a screeching hackery and wretched cattle, posterity will not dare to violate the sanctity of custom by departing from their example. This is one instance of a thousand in which the inveterate prejudices of Asiatics stand in the way of their improvement, and bid defiance equally to the exertions of the active, and the hopes of the benevolent.

SIMPLE and inartificial as the hackery certainly is, it is the most common vehicle used by the natives in conveying bulky and heavy articles by land; it is employed



*Am. Aug. 18.*



employed also by Europeans, from necessity, in carrying brick, mortar, and other materials for house-building; in a word, every job performed in Europe, by a cart, carr, or waggon, is performed here by these machines; and it is surprising to observe what assiduity can perform with instruments according to our views so totally contemptible. They carry building materials also upon small asses, as was the practice of the Jews.

ANOTHER implement more useful, and, if possible, still more humble in appearance, and awkward in its structure—is the Plough. Almost the whole cultivation of India is carried on with an instrument consisting of two or three pieces of wood most awkwardly connected, answering the purposes of our plough. But the land in this part of the country is scratched, not tilled: a second, a third, and often a fourth stirring, is necessary to give even the appearance of tilth to a field.

The soil of the upper provinces being light and thin, may probably yield to feeble instruments of husbandry; but in Bengal, where it is deep and loamy to the depth of nine or ten feet, surely a more substantial tillage would be attended with advantage. During the rainy season the lands lying under grass, send up a coarse spritty substance, nearly allied to what is called *bent* in some parts of Britain. This grass, though extremely unfit nutriment for cattle, resists the plough so very obstinately, that I have frequently



quently seen four very powerful horses put to a stand by it. What impression, then, upon such a soil, can be made by a Hindostanny plough, which the driver can lift with one hand to his shoulder, and thus carry to the field? The effect is precisely what may be expected: you frequently see a field of this description, after one plowing, appear as green as before; only a few scratches are perceptible, here and there, more resembling the digging of a mole, than the work of a plough.

PATIENCE, however, here, as in other matters, is the conspicuous merit of a Bengal peasant: he perseveres stirring the same field, a second, a third, and a fourth time, till something like mould appears, deep enough to cover the seed. This he soon commits to its bosom; and is seldom disappointed in reaping a crop, which you would more readily consider as the product of a good soil and climate, than the reward either of the husbandman's skill, or his ingenuity.

As Bengal is, perhaps, more remarkably defective in its breed of cattle, than most other parts of India; I cannot leave this subject without mentioning a few other animals by which they endeavour to supply this want. They have a small species of horses, which, from their poor feeding, are still more ugly than small: these they employ chiefly in riding, as often as they travel from home. The accoutrements which supply the place of a saddle and bridle, are perfectly suitable to the appearance of the horse and rider; but  
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in no other point of view can they be recommended. Among the Ryuts, to whom this account is meant to apply, any thing like a handsome horse is a thing of all others the most uncommon, except that of meeting with one in good condition. This is the more worthy of notice, as I have not observed any work assigned the horse in this part of the country, excepting that just mentioned, of carrying his master such easy journeys as occasion may require: nor is this, in general, to be ascribed to the want of pasture: the grounds may, in some instances, be overstocked; but this is by no means universal. The defect must lie, therefore, rather in the *quality*, than the *quantity* of pasture. During the rainy season, I apprehend that there is hardly any pasture less nutritive than that of the province of Bengal. That strong spirit, already mentioned, is, at that season, the prevailing growth of the whole province. It pushes up a single weed stem, which is as hard as reeds, and is never touched by cattle so long as any other vegetable can be had. Other grasses of a better quality are sometimes intermixed with this unpalatable food; but, during the rains, are of so rapid a growth, that their juices must be thin, and ill fitted for nutrition.

A VARIETY of circumstances concur to demonstrate the inferior quality of the pasture of this province. No person ever trusts to it alone in fattening either a bullock or a sheep. Whatever is intended for the table must be either kept upon dry food, or served regularly with gram twice a-day. The case

case is the same with Europeans who keep Arabian or Persian horses for the saddle: they are fed with the roots of the finer grasses picked, carefully dug up by a groom, and are served twice a-day with grain. The watery insipidity of tropical plants is a circumstance universally noticed by Europeans on their first arrival in the East or West Indies. Asparagus, Cauliflower, Cabbages, and all the esculent vegetables used at the table, are raised in considerable plenty: but they are comparatively tasteless, and consequently deficient in their nutritious powers.

A CERTAIN quantity of roses distilled in any part of Hindostan, will not produce nearly the same measure of rose-water or otto. This point, once established, various effects flow from it, unfavourable to the cultivator in warm latitudes. His working cattle cannot be kept in flesh without superior trouble and expence: his beef and mutton cannot be fitted for the market unless stall-fed; and even that expence when incurred, can never secure the produce of the same quality with an European grazier. After every precaution, the beef of Ireland, though fed on grass only, is as superior to that of Bengal, as any two things of the same species can be supposed; may not this, then, be the cause why the native Bengalese horses, cows, asses and goats, are found universally so lean and miserable, when left to gather their sustenance from the pasture only? The capital, skill, and industry, of the natives, circumscribed as they are, must prove inadequate to oppose an obstacle, to agricultural

agricultural improvement so universal, and so powerful in its operation. Turnips, cabbages, clover, and all the articles of house-feeding, are the last, and perhaps the most capital attainments in English husbandry; attainments which we, perhaps, never could have reached, had not a good market for beef, and the value of manure, compensated in some measure for the original expence.

How then shall the poor Hindoo support the flesh and strength of his draught cattle with artificial grasses; while, by his religious prejudices, he is prohibited from using beef as an article of food, and is consequently precluded from a market for those he fattens? While the small value of his produce can hardly defray the charge of the sorry implements he already uses, how is he to incur the superior expence of better feeding? To this I know it will be said, that good tillage always pays for itself better than bad; and that if a well-dressed field and rich crop, cannot defray charges, this never will be done by a wretched tillage, and worse returns. In Europe this reasoning will in general prove sound; but in Hindostan, where every circumstance of rent, market, and price are different, it appears highly doubtful. This much is certain, that the richest crop of wheat ever grown in England, would not, in common seasons, produce a price in Bengal equal to half the expence of culture. English husbandry, and Asiatic markets seem to me in a great measure incompatible.

## THE DRAUGHT CATTLE OF THE ARMY—THE ELEPHANT.

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*Berhampore, Oct. 1797.*

THE cattle employed in carrying the baggage and artillery of the Hon. Company's troops, are almost in every respect different from those I mentioned lately. They are well proportioned, large in size, in high order, and capable of great exertion. What shews with full evidence the insufficiency of the common pasture in Bengal to support working cattle in full condition, government allows all the cattle in the service a certain portion of gram every day, besides their field grafs; and the carcases of such as I have seen, are satisfactory vouchers for the fidelity of its expenditure.

THESE cattle, however, are probably of the same breed with those of the upper districts: they are in general purchased at Purneah, and the adjacent country,

try, which is scarcely three hundred miles from Calcutta, around which the draught cattle are in the wretched condition already mentioned. Nothing delighted me so agreeably as viewing the Company's bullocks. From the universal complaint of the want of celerity in the movements of our army, compared with that of the country powers, I had conceived an unfavourable idea of the draught cattle attached to the British army. Even in the last war, till the Marquis of Cornwallis took the field, Tip-poo's troops could spread devastation all around our camp, without a possibility of coming up with him. Had not another plan of operations been then adopted, the enemy, secure in the rapidity of his marches, might perhaps as before have baffled our pursuit, and continued to bid defiance to our power. This must have been owing to the number, and not to the superior excellence of his cattle. In the midst of his own dominions, he could command a choice of bullocks, while our cattle could not easily be transported into the Myfore; and where their loss by the casualties of service, in a country so distant and inaccessible, was without great efforts irreparable.

THE elephants and camels attached to the Company's force, are equally serviceable with the oxen, and are kept in the same excellent condition. On the first day of every month, the Seapoy regiments, wherever stationed, turn out at day-break, with the whole baggage and cattle attached to them. Their number and condition is then inspected; allowances

stopped

stopped for deficiencies; and proper enquiry after the delinquency, if any of the cattle belonging to the corps are unfit for service. This regulation has certainly, while the spirit of it is observed, an excellent effect: you may conjecture the nature of those practices which gave birth to it: that old maxim, however, is here, perhaps, as just as in other instances; “ *Ex malis moribus oriuntur bonæ leges.*”

ON the natural history of the elephant, it is to you unnecessary that I should enlarge: the usefulness of that noble animal to an Asiatic army is becoming daily better known; and of consequence he is deemed of greater importance. His tameness, docility, sagacity, and strength, exceed, in many cases, every thing that has been said of him by naturalists, extravagantly as they seem to rate his qualities. When a heavy gun has sunk the carriage so deeply in the mud, that almost any force applied in the common way of draught, would infallibly prove ineffectual; the elephant alternately raises the wheels with his proboscis, so that the ordinary number of cattle easily pull it forward. Here it is art, or something resembling reason, that comes in aid to the unavailing efforts of mere strength.

WITH all this force and sagacity, the elephant is so tractable as renders him very useful for domestic purposes as well as war. It is common for private gentlemen to keep one or two to go a hunting, or to take an airing every morning and evening. He is

is then elegantly comparisoned with a howdah, and so little vice or even inequality is there in his temper, that he is mounted by the most timid even of fair sex. Accommodated in this manner, you not only breathe a freer air, amidst sultry weather, but bid defiance to the stratagem or malice of the tiger, buffalo, and wild boar, with which many parts of the country are infested. Among the circumscribed enjoyments of an European, the diversion of hunting upon this animal ought not to be omitted. The elephant is seldom terrified at the approach of the most ferocious animals: he is so cool and steady amidst the report of musketry, that you may take a good aim from his back. Those who are fond of boar and tiger hunting, are better qualified than I, to do justice to the merits of the elephant in this particular, and to them I willingly consign the task of their illustration.

BUT the service for which the elephant seems to be most peculiarly fitted, and in which he certainly feels most gratification, is that of accompanying the retinue of the native princes. Fond to extravagance, of shew and magnificence, they seldom appear in public without a numerous retinue, consisting of cavalry and infantry, with horses, palankeens, and elephants for their conveyance. Those destined for the prince, or any of his favourites, are equipped with splendid howdahs, all blazing with gold: the greater part of the body of the animal is covered with embroidered cloth, curiously wrought according



ing to their notions of grandeur and elegance. The howdah itself, consists of two, and sometimes three small apartments, and affords complete protection from the sun. There sits the monarch, flanked by two attendants, while the elephant moves along, with a slow, but majestic pace, entirely conforming to the Asiatic ideas of state and magnificence.

It is on these occasions, that this princely animal, which nature seems to have formed for the gratification of eastern luxury and state, appears in his greatest glory. Impressed with a consciousness of his importance in the service of man, and gratified with the splendour of his accoutrements, he seems sensible of possessing the highest rank in the brute creation, and looks down upon the inferior tribes, not with a malevolent, but a dignified contempt.

WHETHER the elephant be employed for the purposes of war, of hunting, or of show, his food is simple, and easily procured. He is fond of the leaves, and smaller branches of trees, which it is the business of one, or two of the natives to provide for him, while he lifts them with his trunk to the person seated on his back; their wages is in this article the only expence\*. As the quick vegetation of trees, as well as of the grasses, and esculent plants, renders their juices thinner and less nutritive, grain is generally

\* His allowance of grain is sixteen seer.

rally added to this natural food of the elephant. Sixteen seer, or thirty English pounds, is the Company's allowance to each for one day : in seasons of a common degree of plenty, this amounts to so very moderate a sum, that several of the subaltern officers in the Bengal army keep them for exercise or amusement.

THE taking of this animal is attended with considerable difficulty, and sometimes with danger. A number of the natives are employed driving them, or frightening them, by alighting fires, into a plain which is intended to be the scene of their captivity. Here there is a large inclosure, leading to others of smaller dimensions, till they are at last pushed into one so narrow, that will neither admit of their turning backwards, nor allow them to proceed. To facilitate this progress, they make use of females already tamed, who entice them forwards, by signs to them too unambiguous to be misunderstood. The elephant is no sooner secured in his narrow cell, than ropes are gradually wreathed around his body and legs, which preclude any danger of his escape. By feeding and gentle usage, he, in a short time, admits his keeper with great complacency : thus the sagacity of the elephant induces him to submit with a good grace, to a bondage which a cunning superior to his own, has put it out of his power to avoid. The India Company are supplied with these useful animals by a contract with certain individuals, who make it their business to pursue and captivate them.

WHAT

WHAT is remarkable with them is, that those which are taken old, are more perfectly tamed than the young. The latter, from the smallness of their size, and the consequent impotence of their restraints, are indulged in playful familiarities with their keepers, which neither the sluggishness of age, nor the maturity of their faculties, can ever afterwards induce them to lay aside.

THE size, habits, and appearance of these animals make a strong impression, when first viewed by an European. When the king's troops first had occasion to see them falling prostrate on their belly, to facilitate the riders' ascent upon their backs, and then rise at a word from the native guide, who is placed immediately behind the ears, upon the neck; they testified at once their admiration of their sagacity, and terror at their strength and enormous bulk.

THE Pheel Kaneh (Elephants' Stables) constituted a great object of the imperial care; and many minute and complex regulations were framed for the government of this department. According to their qualities, age, and size, these animals were classed in a variety of different ranks, with an allowance of provisions and of men to each class, proportioned to the wants and importance of the animal. The elephant is chiefly used by the natives of India for riding, war, or in hunting, or fighting at the imperial amusements.

THEY were formerly taken in many more districts than at present, which affords a presumption of the increase of population : the great number maintained at the court of Delhi, and at the palaces of the viceroy, must have proved a serious waste of provisions. The full complement of elephants required to be kept by a mansabdar of the rank of ten thousand, was two hundred ; and allowing the maintenance of each elephant to be equal to that of forty men, the subsistence of eight thousand persons is required for the support of a part only of the equipage of a single officer ; if to this be added the due number of camels, horses, bullocks, &c. the retinue of this officer is, of itself, equal to a very large army.

THE account of this animal given by Abul-Fazel, is founded on more ample experience than that of any of our naturalists, and would have furnished M. de Buffon with more accurate knowledge than he seems to have possessed on this subject. The natural life of the elephant he states to be an hundred and twenty years ; the female goes with young eighteen lunar months ; in general she has but one at a birth, but sometimes two. The young one suckles five years, after which time it feeds upon vegetables. At every ten years of its growth it undergoes some change, and has a different name ; the price rising from 100 to 10,000 Rs.

THE accoutrements and harness \* of the elephant are very numerous and expensive; for the loss of them, and for any injury happening to the animal, the keepers are amerced or punished, sometimes with death. For each of the large-sized elephants four keepers are allowed, at stated wages; viz. a ~~vi~~ <sup>vi</sup> ~~ra~~ <sup>ra</sup> ~~me~~ <sup>me</sup> ~~hawt~~ <sup>hawt</sup>, Buy, and two Mayhets.

OF

\* Above thirty articles are mentioned in the Aycah Acbery, with the fines for losing or destroying them,

## OF THE CAMEL, AND ITS USES IN THE ARMY.

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*Ganges, 1797.*

THE utility of the elephant, as a beast of burden, in Asia, highly as it is rated, is, in many respects, surpassed by that of the Camel. Inferior only in bulk and strength, this patient servant bears fatigue, hunger, and watching, to a degree scarcely credible by those who never witnessed his toils. The weight he bears must bear some proportion to his size and strength, which, in different individuals is various; but, when not overburdened, he will march without meat or drink, for days together. It is his uncommon power of abstinence from drink that has recommended the camel, since the earliest ages, as the most proper animal for conveying provisions and merchandise, in those long periodical expeditions of the caravans, that make so conspicuous a figure in the history of commerce and religion in many parts of the

the

the East. In travelling through the parched deserts of many parts of Asia, you can procure no water for many days; no tree, shrub, or trace of vegetation, is to be discerned. On all sides you are surrounded by an over-powering heat from the glare of the rays of the sun reflected from myriads of bright particles of sand; or are enveloped in boundless clouds of dust where these particles are drifted by the wind into the air.

EVEN those comparatively small banks of sand, that are left naked by the subsiding of the Ganges, sometimes appear like a cloud of smoke, and are a suffocating annoyance to the traveller during a high wind. These, however they may give credibility to dangers arising from travelling through the unbounded deserts of the interior country, exhibit but a faint image of the horror, stillness, and desolation, which the aspect of nature assumes in those dreary regions.

WITHOUT the ministry of the camel, "the ship of the desert" (as he has been denominated), or some animal equally patient and abstemious, those parts would prove impervious to the human race.

THOUGH no part of Hindostan is equally parched and sterile with Arabia and Syria, yet the camel has been used as a beast of burden from time immemorial: and in reading the patriarchal history, you are surprised at the coincidence and similarity of the articles enumerated in the wealth of Abraham or of Job,

Job, and that of a Hindoo Rajah : each have their she-afles, and their she-afles ; their camels, and their goats.

WHEN the East-India Company acquired territorial possessions in this peninsula, and an army to protect them, they, in this respect, wisely accommodated their regulations to the customs of the country, and the necessities of the service. A number of camels, as well as of elephants and bullocks, are attached to each corps of their troops. So necessary indeed are they found, that many of the officers, before a march, supply themselves with extra camels for their own accommodation. Their quietness and docility renders them peculiarly fitted for carrying tents and baggage ; and, in general, the slowness of their progress is no inconvenience in the march of an Indian army. During its continuance the troops are put in motion at, or before day-break, and reach their ground to breakfast, at nine, ten, or eleven in the forenoon, according to the distance intended to move. By dispatching the cattle early, the tents and baggage are pitched on the ground to be occupied, and breakfast prepared for the troops as soon as they arrive. When in the vicinity of an enemy, every circumstance must vary with the occasion ; but as often as this is not the case, an eastern army will march without any inconvenience during the cold season, in the manner I have described, to a distance of two thousand miles. A great number of purveyors, coolies, bullock-drivers, and other camp-followers, are necessary : The rapidity



ty of an Asiatic march, to an European, must appear comparatively small: but these inconveniences, are partly from custom tolerated, and partly from necessity unavoidable. An officer, even of inferior rank, finds the service of between twelve and fifteen natives necessary to accommodate him; the grain, baggage, and provisions of the private soldier require a similar proportion of hands for their transportation. Thus a number upon the whole, perhaps, equal to three or four times that of the effective troops are always found in the retinue of an Asiatic army.

WHEN the Marquis of Cornwallis took the field, during the concluding campaigns of the late war, the whole number of his followers amounted, it is said, to near half a million: this nobleman is the last officer in his Majesty's service who would in any instance, give way to that inefficient expenditure which their vanity and ostentation has sometimes extorted from our commanders in India. These passions are infectious in the East; and to them the native princes, with a childish effeminacy worthy of their character, have almost universally sacrificed their true importance and power.

THE detachment I now accompany, proceeds by water, on a march towards the upper provinces, and though it consists only of a few hundred men, 1800 natives are scarcely sufficient to drag our boats against the weight of the stream.

THE number of men necessarily attached to an Indian army, gives a degree of credibility to the accounts transmitted to us of the forces and retinue of Artaxerxes, when he invaded the small republics of Greece, and rendered their valour immortal by the defeats which he suffered. The population and resources of that monarchy were unquestionably great; and if an army of near two hundred thousand men followed the great king, this will account for the vast hosts, with which, the Greek historians inform us, he intended to desolate Europe. The epithet of *Mendax Græcia*, which with the Roman satirist has loaded that brave and ingenious people, may, therefore be found to contain more malice than truth; for the Zemindary troops, or militia of India in the time of Acber, are stated at four millions in the Ayeen Acbery.

THE motion of the elephant, the driver, seated immediately behind his ears, can direct or accelerate as he pleases by means of a prong of steel: but hardly any application will give rapidity to the camel: he is in general accustomed to travel under a load, and his whole habits and construction disqualify him for speed. His limbs are indeed long, and robust; but they are unwieldy, and ill-proportioned. The officers upon a march, therefore, generally prefer a horse; every one of which lays him under the necessity of keeping, at least, two additional servants, a grass-cutter (*grassiah*), to gather his provision, and a groom (*syce*), to keep him in order. So obstinately does every

every native of India adhere to his little sphere of duty, either from indolence or religious prejudices, that you may as well attempt to remove a mountain, as persuade the servant who dresses your horse, to cut his grass, or *vice versa*. Nor does this prevail in one part of menial service only; it pervades it throughout.

SOMETHING here, I will allow, must be imputed to the vanity of Europeans; which, in some instances, reduces them to the pitiful condition of craving gratification from the number and bustle of their attendants. When this is the case, it is easily discovered; for it courts your attention: the number of native servants employed nine times out of ten, is owing to themselves, and not to their masters. To the latter, they are always an expence, and too often a vexation. After the usual number of them is provided for your baggage, your cattle, and your own attendance, you are far from being either so independent, or so comfortable, as a single foot-boy in Europe can make you. Sometimes their officiousness disgusts, their negligence and indolence still oftener frets; while perverseness and dishonesty fail not to provoke the master whose temper is not under uncommon control.

FROM these particulars you will readily conceive, that travelling is in this part of the world unavoidably expensive; liberal as the pay of the army appears, a subaltern on duty cannot make any considerable saving from his allowance. Instances of folly and

and extravagance then no doubt often are ; nor is it our business to vindicate them ; but in Europe, I know, it is too often the custom to calculate according to their own wants, by their own scale, and, consequently, to blame as extravagant dissipation, that very conduct which, in the same circumstances, they would themselves be infallibly compelled to adopt.

THE daily expence of a horse, added to the interest of his original price, the camel, and his keeping, with the wages of fifteen servants, are heavy items monthly against a subaltern's pay ; and it is certain, that he could not be equally serviceable without most of these auxiliaries ; without many of them, he could be of no service at all.

YET many subalterns in Bengal have accumulated money ; by parsimoniously saving every possible sum, and by debarring themselves of many comforts which the climate certainly requires.

THE general features of the European character in India is certainly profusion : when the opposite temper prevails, it is indulged without any bounds. Greater examples of avarice and parsimony cannot, perhaps, any where be produced than this country can furnish, and these are most commonly among the rich. A person worth one hundred thousand pounds, has been known to linger in the country for the sake of accumulating a little more, evidently

at the risk of his life: often life itself has been sacrificed to this irresistible appetite; which, like some diseases, grows by indulgence.—

*Crescit indulgens sibi dirus hyæps.*

OF THE BUFFALO, AND THE DRAUGHT CATTLE OF  
HINDOSTAN.

.....

*Mongeer,* 1797.

IN giving an account of the cattle of Bengal, the buffalo ought not to be omitted. This animal, in its wild state, is found in almost every part of the continent, and in most of the islands. This is in all probability the aboriginal race of horned cattle, from which the various diversities have been produced, during many ages in their state of domestication. In Bengal, great numbers are found, both tame and wild. In the latter state, they are perhaps the most formidable enemies you can meet upon a journey.

THEY are generally jet black ; and characterised by long femicircular horns, which instead of standing erect, or bending forward, are laid backwards upon the neck. These horns which, from their awkward

awkward position, you at first may imagine inoffensive instruments, are, in reality, most formidable weapons. If you either come upon the buffalo by surprise, in a situation where he cannot escape, or offer him any provocation, he makes a violent attack, with his snout placed between his forelegs, and his horns pointed forwards. If you cannot escape the push, by instantly leaping aside, you are caught upon his horns, and infallibly torn to pieces. So quickly does he turn and renew his attacks, if he fail in the first onset, that there is no hope for the devoted victim of his fury, if he cannot reach a tree. Even when the traveller has been thus fortunate, so implacable are the resentments of this animal, that many instances are known where he has remained for several hours at the root of the tree, expressing his rage and disappointment. One gentleman, who fortunately escaped in this manner, assured me, that his pursuer kept him a close prisoner upon a tree for a great part of a day ; till he at last bethought himself of throwing down his coat ; upon which, having satiated his rage, the buffalo disappeared.

WITH all this hostility, the buffalo is, strictly speaking, neither a predatory, nor an offensive animal. He is in general roused by some provocation, or instigated by the principle of self defence, before he commences an attack upon man. Happy it is for the poor Bengalees, that this is the case ; for his immense strength enables him, when they fall in his power, to toss them in the air with as much facility

as he would a cat : and if you may judge by the terror of the natives on the appearance of a wild buffalo, you must conclude that it is not uncommon for them to fall a sacrifice to his resentment. I had lately an opportunity of seeing one of them surprised on the river side, by my dandies, (boatmen) in his retreat among thick grass above six feet high. The poor sailors instantly precipitated themselves from the bank into the river, with screams of terror. Happily for us, the animal himself seemed to have been agitated by similar sensations, for he scampered away with great speed to a considerable distance, before he even ventured to look behind him.

NOTWITHSTANDING these unpromising habits, the buffalo is fully capable of domestication. I have passed through whole herds of them, in the districts of Purneah, and Kishengunge, that seemed as perfectly tame, as the other cattle which grazed along with them. They are employed in carrying goods, for which their strength renders them more serviceable than an ox. They are kept in herds for the sake of their milk, from which is made Ghee, that universal article of Hindoo diet.

THE buffalo is hardly any where employed in a team. His food is more costly than that of the bullock ; and though his strength be far superior, that circumstance is perhaps of no great moment in the present state of the Indian plough, which, from appearance,



pearance, might be drawn by two goats as well as cattle.

THE milk of the buffalo is of a rank taste, and the butter bad; what is procured in the Bazar is generally of a very inferior quality, and is perhaps the produce of this species, as frequently as of the cow.

A mixture of the buffalo, with the common horned cattle of the country, gives a pleasing variety to the herd of a farmer. They are all black, while the common cows and oxen are five sixths of them white, with a mixture of iron grey, which deepens in its colour towards the face, and the extremities of the legs and tail. These cattle, seen at a distance in the fields, are generally mistaken by Europeans on their first arrival, for flocks of sheep, from their white colour, and diminutive size. It is from the last circumstance, that some conclude that their place in the yoke might be advantageously supplied by the buffalo; for at the season I now write, ploughs, and cattle, pitiful beyond all description, are daily seen by the sides of the river, scratching the fields in a manner more resembling the pastime of children, than the labours of farmers, who are to provide the food of millions of inhabitants. With better cattle, and more substantial implements, a much more effectual tilth would be given the soil, than by five or six stirrugs in the present method. But for the present management hardly any expence is incurred at all.

1. The plough is made by the farmer from the first tree that suits his purpose: were it constructed by a tradesman, or were his cattle of a better breed, or better fed, money must be advanced, which he cannot afford.

THE beef, hide, and horns, of so large an animal as the buffalo, were he within the reach of an European market, would prove valuable articles of commerce. Here neither of these articles are of much consideration. The hide of an ox is so cheap, that you have it tanned, and manufactured into shoes, at half a rupee, about 1s. 3d. per pair; by the few natives who wear leather shoes, they are procured much cheaper.

SOME Europeans have lately engaged in the tanning of leather, and the manufacture of shoes, apparently with great success. They produce these articles nearly of equal quality, and so cheap as nearly to preclude the sale of European investments of this commodity.

THE common draught cattle of India are distinguished by the peculiarity of a large hunch, or protuberance, above the shoulders, upon which the yoke rests. In size, they are small, but well proportioned, and singularly active. Those kept for travelling coaches are capable of performing long journeys nearly in the same time with a horse. The bad condition, and pitiful plight in which they are often kept

kept by the poor Ryuts, is not able wholly to destroy these excellent qualities of the Bengal cattle: they work patiently in the yoke, beneath the vertical sun, for many hours, and upon the most wretched food, chaff or dried straw.

OF THE BREED OF SHEEP; AND TREATMENT OF  
THE HOG.

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*Chandernagore,* 1797.

AFTER describing the working cattle of the Hindoos, and some of the more useful of their domestic animals, I cannot close this subject without mentioning their breed of sheep, and goats. These animals are both reared, and in very great abundance, if you make allowance for the small consumption of them arising from those circumstances in their superstition, which I have already mentioned.

THE size of the Bengalee sheep is small; his figure lank and thin; and the colour of three fourths of a flock, is black or dark grey. Hence in Asia, the colour of cattle is in general exactly the reverse of that in Europe; what we term in England, a herd of black cattle, is here white; a flock of sheep,

which at home is generally white, here is dark grey or black.

THE quality of a fleece of wool, in this country, is worse, if possible, than its colour: it is harsh, thin, and hairy, in a very remarkable degree. No part of cloathing, or domestic furniture, so far as I have observed, is manufactured of wool, except a coarse kind of blanketting, which some of the dandies, and people in the upper country, use during the cold season, as a wrapper in the night: this luxury is, however, by no means general, or even common; though there is reason to believe that every native, did his income admit of it, would wear a blanket at certain seasons, and at all times would lie on one. I know nothing with which you can compare the India fleece, unless that hairy stuff, the refuse of marketable wool, which the farmers were in some parts of Scotland wont to make into a cloth for covering their malt kilns.

THE breed of sheep, which I had an opportunity to examine on the Coromandel coast, between Bengal and Madras, are still of an inferior quality, both with regard to the fleece and carcase. From their coarse hairy covering, and their thin and incompact shape, one is led to conjecture that they must have some affinity to the goat or the deer. They present the exact figure of what might be supposed would be possessed by an intermediate race between the sheep, and those animals. Two or three of them  
may,

may, in some parts, be purchased for a rupee : and though they may be of considerable use to a ship's company after a long voyage, they are otherwise a very unprofitable purchase. Hardly any thing short of absolute want can make an Englishman relish such mutton, if it can be called by that name. The Europeans, in these parts, frequently procure a supply of Bengal mutton, indifferent as it is, from the impossibility of making a comfortable meal of that reared in their vicinity.

THERE are in Bengal a few sheep with four horns, two on each side of the head. This is a regular discriminating mark of the species, and not a *lusus naturæ*. These are superior in size, and better proportioned than the common kind ; but their number is small.

IN this respect, the province of Bengal possesses a manifest advantage over most other parts of India ; for though you there procure your mutton from the Ryut small in size, and in miserable condition, by good keeping for eight or twelve months, you supply yourself with mutton, which in richness and flavour, is not inferior to the grass-fed mutton in Europe.

IT is in this manner that the officers of the army, and the civil servants of the Hon. Company, supply themselves at all the remote stations, both with beef and mutton. The cattle are regularly fed with gram  
twice

twice a day, by their own servants; a herdsman is hired to superintend this business, whose picturesque figure, leading his flock around the cantonments, recalls to your imagination the venerable simplicity of the patriarchal ages: he goes before his flock, and regulates its motions by his call: "The sheep know his voice, and follow him."

Thus are the officers of the army provided, if not with luxuries, at least with the comforts of the table; while an innocent amusement is afforded them, which contributes its part to animate the listlessness of an Indian life. Circumstances of this kind, however minute or contemptible they may appear in description, have a greater influence on the moral character and happiness of men, than we are commonly aware of. A numerous society of young men, who have not been early bred to literary pursuits, experience the sad *tedium* of the military life during peace, which they are ever in danger of dissipating by excess, gaming or extravagance, indulgences pernicious every where, but particularly fatal in every part of India. The flesh of the goat is not used as an article of food, unless in some few instances, where it is surreptitiously introduced in place of mutton, by a connivance among the native servants. The kid, however, is a very common dish; and it is the only one which the Hindoos produce in tolerable condition. Here nature produces a sufficient supply of proper food in the milk of the dam; and all required of the keeper is sufficient honesty to prevent

vent him from abstracting its support. Goat's milk is commonly used at the tea and breakfast table; and if by that article the native can make a single anna, his virtue will seldom enable him to resist the temptation, and do justice to the kid, even where he is the owner himself, and to receive a price proportioned to its quality. This peculiarity characterises the natives of every description: perfect children in reflection, a present gain, however trifling, in their estimation, outweighs a future good, though equally certain, and of ten times the amount. A Hindoo, though reduced to the last farthing, if he has curry and rice for the present day, will not work for the supply of the next. "Sufficient to him is the evil of the day;" he "takes no thought for to-morrow."

THE goat, which is every where a lank and ill-conditioned animal, approaches nearer to the European standard, than perhaps any other animal in Bengal.

NITHER the horse, the sheep, nor the goat, have any peculiar sanctity annexed to them by the Brahminical superstition. It is otherwise with the cow; which in India is every where regarded with veneration, and is one object of peculiar worship. Representations of objects are made upon the walls with cow dung, and these enter deeply into their routine of daily observances. The same materials are also dried and used as fuel for dressing their victuals: for  
this



this purpose the women collect it, and bake it into cakes, which are placed in a position where they soon become dry and fit for use,

THE sacred character of the cow probably gives this fuel a preference to every other, in the imagination of a Hindoo; for it is used in Calcutta, where wood is in abundance. M. De Voltaire has displayed at once his superficial acquaintance with Asiatic manners, and his propensity to ridicule, in his attempt to vilify the sacred writings, on account of some expression relating to this subject, uttered by the Prophet Jeremiah.

ON certain occasions, it is customary for the Hindoos to consecrate a bull, as an offering to their deities: particular ceremonies are then performed, and a mark is impressed upon the animal, expressive of his future condition to all the inhabitants. No consideration can induce the pious Bengalee to hurt or even controul one of these consecrated animals. You may see them every day roaming at large through the streets of Calcutta, and tasting rice, gram, or flour in the Bazar, according to their pleasure. The utmost a native will do, when he observes the animal doing too much honour to his goods, is to urge him, by the gentlest hints, to taste of the vegetables or grain, on his neighbour's stall.

A remarkable example of Oriental superstition occurs in the treatment of one of the most useful domestic

mestic animals, the hog. The Mahommedans, whose numbers are considerable in almost every part of Hindostan, are prohibited from eating this animal by their law; and however slightly they regard its moral précepts, like every ignorant people they pay implicit veneration to its ceremonial and superstitious injunctions. In rearing this useful animal, they are out of the question. To the far greater part of the Hindoos, this economy is denied by a prohibition still more pernicious, because more general, which forbids the higher classes the use of every terrestrial animal, in the class of quadrupeds, as an article of food. Some there are, I am aware, of the dregs of both people, who either from misdemeanours of their own, or from hereditary meanness, are destitute of all rank, and consequently are free from the tyranny of opinion. These may eat pork, or any kind of flesh, but unfortunately they are unable to pay for it; for they are in general employed in the lowest menial offices about Europeans, and subsist on what is carried away from their tables, after it has been rejected by the Portugueze, and upper servants. In this instance, then, the farmer is deprived of a market for one of the most wholesome, and the most easily reared of all kinds of animal food. What relief might not be found, during a scarcity of grain, by resorting to pork, where fruit and other nourishment for it is so abundant!

TILL lately, a similar prejudice against this kind of food was entertained in some parts of Scotland: but the

the knowledge lately diffeminated through that kingdom, by the means already mentioned, has in part already done it away. A judicious farmer, in that country, lately told me that he had begun to ~~not~~ fwine upon the refuse of his dairy and of his grain; and to fatten them with potatoes or meal as opportunity offered. On a comparison of his profits in this method, with those made by the same articles sent immediately to market, he found a very considerable balance in favour of feeding; a practice which he has since continued.

ASIATIC prejudices are more deeply rooted, than those of our countrymen; and where supported by such numbers and interest, we have not the same means of removing them. Herds of swine I have met with in Bengal; but they are in small numbers, and merely intended for the Europeans and outcasts, the former of whom bear not, perhaps, the proportion to the whole of the inhabitants, of one to a thousand.

THERE is hardly any degree of ignorance, or of indolence, at all compatible with a state of society, that is not adequate to the rearing of this useful animal. In many of the islands of the South Sea, it was found a valuable acquisition to our ship's store of provisions, and constituted the only animal food known to the natives.

No country is perhaps more productive of nutritive plants and fruits, than Bengal; and these, in the hands of the patient and industrious natives, might be applied to the feeding of pork with the happiest success, could the chains of their superstition thus far be broken.

THE sugar cane is remarkably nutritive; and while it is in season, the wild hog is in excellent order, as well as flavour. What loss is sustained from the refuse of a sugar farm being applied to other purposes, or perhaps lost!

THOUGH the artifices of the priesthood have effectually debarred the Hindoos the use of the hog, no contrivance has yet been fallen upon to free them from the destructive ravages of that animal in its wild state. In some districts, the jungles are much infested by them; from whence they issue forth in the night, and prey upon the rice fields, where the quantity of food they trample down is much greater than what they devour. Thus the poor Hindoo is condemned to have his sustenance, earned by the sweat of his brow, continually wasted by an animal which providence has fitted, of all others, the most liberally to contribute to his support.

ON travelling through the country you see a sort of platform raised upon bamboos, and covered with thatch, where the proprietor of the rice field stations a servant to watch the incursions of the wild hogs

during night. This cannot be done without a considerable trouble and expence, for you sometimes see several of these erections in the same field: yet there is reason to apprehend that the owner, ~~and~~ all his precautions, is annually robbed to a considerable amount.

OF

## THE JACKAL, AND OTHER PREDATORY ANIMALS.

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*Sootee, Nov. 1797.*

THE predatory animals, among the quadrupeds, birds, and insects, are extremely numerous in every part of India. Their depredations are often hurtful, and always vexatious ; but their presence in a warm climate, in any considerable degree populous, seems necessary.

THE Jackal holds the most conspicuous place among this tribe, either considered with regard to his annoyances or his utility. The figure and general habits of this animal are sufficiently described in every treatise of natural history : what is remarkable of him here, is the familiarity with which he enters the largest cities ; and the mournful howlings by which he interrupts the silence of the night.

· EACH

EACH night, about twelve or one o'clock, he enters the suburbs of Calcutta, and soon traverses every lane and square of that capital. The noise he makes is still more loud and mournful than the howl of the dog : at certain intervals, it is constantly renewed during every hour of the night, and its entire cessation is a sure symptom of the approach of day ; a circumstance which, probably, would not have escaped Dean Swift, in his description of the morning, had he seen this part of the world : however this is the silence of the jackal on Aurora's approach, a fact yet unsung, and remains in that store of untouched materials which is destined to decorate the works of some future poet.

THE principal characteristic of the jackal is his voracity ; which permits little or no discrimination in the choice of food. This is probably the chief security of the hen roosts, which he never robs, if his gluttony can be satiated by the filth and carrion of the bazars and streets. In every large town more or less of such impurities are collected, and would of necessity soon taint the air, in a climate so hot as India, were it not removed by these scavengers provided by Nature.

THE jackal wanders through every village and farm-yard, as punctually as the streets of Calcutta ; but there his cravings are more importunate as his prey is less considerable. It is said that the howl which this animal instinctively utters, is received as a signal

signal of pursuit, by every other in the same vicinity; and by a continual accession of numbers, they are enabled to run down the hare, or the wild pig; being the place of such as become fatigued, and are obliged to desist from the chase, is supplied by fresh assistants, who in time accomplish the work of death. Of this fact I have no evidence, and cannot vouch its truth.

**Pariah Dogs** roam night and day about the dwellings of the natives, and perform for them, with less noise, the same friendly offices of the jackal. To this animal we have nothing corresponding in Europe, excepting in the streets of Constantinople. It is perfectly tame among the natives, and enters their houses, at all times with the familiarity of a domestic: to Europeans his experience renders him more shy, as he is often pursued by the young cadets for want of other sport. Such a number of dogs prowling about the streets, and under no confinement, because claimed by no person, renders canine madness a matter of serious apprehension in Calcutta. When symptoms of hydrophobia appear, the whole race of pariah dogs is proscribed; and the natives, whose humanity upon almost every occasion yields to their love of money, kill great numbers, for two anas a dog, the price put upon each head.

THESE dogs are said to be very useful, in picking up filth and nuisances from the streets. They are generally mangy: in some the disease goes on so foul and



and morbid an appearance, as fully evinces the grossness of their appetite, and the impurity of their food. It is certain, that the human bodies thrown into the river, are not secure from their voracity.

THE pariah dog seems, from its external figure, as well as its habits, to have an affinity to the jackal. It is not improbable, that an illegitimate commerce may be sometimes carried on between these different branches of the canine tribe. This circumstance is supposed, by the Comte de Buffon, to increase the varieties of the feathered race, as often as unpaired individuals of different genera and sexes meet in the forests; "*qui sçait, tout ce qui fait, dans les fonds des bois?*" says that lively writer; and it may be equally difficult to ascertain what enterpizes these abominable animals are engaged in throughout the lanes and jungles during the darkness of night.

THE large long-tailed Ape is another destructive animal, that hovers around the dwellings of the natives of Bengal. This animal, in this province, is seldom seen far from the neighbourhood of man: there his cravings often instigate him to pilfer the food of the natives, who sometimes repel him; but oftener, from a kind of reverence they have for the tribe, they supply his wants.

IN Bootan the natives pay a sort of worship to the monkies; when invaded by the Chinese, they expressed

e greatest horror at seeing them eaten by that

At every village you hear numbers of them scambling among the trees : a large ape will run over the whole breadth of a banyan-tree, leaping from branch to branch nearly as quickly as it would upon the ground. Such feats of agility in the females are the more remarkable ; as they often spring from one branch to another, while a young one, perhaps, of half her size, hangs by its claws from her belly, with its back turned downwards.

WHEN kindly used, they seem grateful, and soon become familiar ; but they remain always watchful and suspicious : on receiving any injury, they are irritable and vindictive in a very high degree. One of our officers, when pursuing game, fell in with a tribe of them, and imprudently discharged his musket, and wounded one. The ape, rendered incapable of flight, instantly determined to repel force, and in grappling with the officer, threw him upon the ground, and tore his clothes and skin : the officer, after this inglorious combat, was glad to retreat to his lodgerrow, in a plight that drew from his companions much more ridicule than pity.

It is thus that the ape of Bengal retaliates their violence upon the lords of the creation, when their dominion degenerates into caprice or tyranny : and it must sometimes be regretted, that the spiritless Hindoo

doo cannot imitate the ape in the magnanimity, resentment, and vindicate the rights of nature.

THE gentleness and tender treatment of the Bengalese to all the animals, is an amiable character; for which he is, probably, indebted to the influence of his religious opinions. There can be no doubt, but the regard shown to the cow, the ape, and many of the birds, proceeds from this source. The belief, that his soul, by transmigration, may after animate one of these creatures; or that it may present it may be the residence of the spirit of a departed friend; certainly creates a strong obligation on his mind to treat them with tenderness, and even with affection.

HOWEVER this be, it is certain, that gentleness to the brute creation is conspicuously displayed in every part of his conduct. The inferior animals, who are taught by experience, whether to shun or associate with man, seem perfectly acquainted with this disposition of the Hindoo. In that confidence with which they approach him, they pay a compliment to his humanity, which would prove at once indiscreet and dangerous if paid to an European. Even the children seem less mischievous and annoying to the wild animals, than in Europe. Did the same number of jackals enter a large town in England, and stroll there in the same manner that they traverse each night the streets of Calcutta; a thousand stratagems and dangers would assail them; and, probably, few would

ld make good their retreat to the woods, in the  
i: g.

It is that the Crow, Kite, Mino, and Sparrow, ~~about~~ about the dwellings of the Orientals, with a degree of familiarity unknown in Europe. The houses of the English are also haunted by these intruders; who, frequently pilfer from the dishes of meat, as they are carried from the cook-room to the hall. The obvious cause of their impunity in these enclosures is the inability of Europeans to pursue them in so hot a climate. Perhaps indolence, produced from the same cause, will in part account for the forbearance of the natives: tenderness, on some occasions, to noxious animals, rather merits the appellation of an indolent facility of nature, than a moral virtue.

In some parts of Europe, the Stork is protected by law, for his services in destroying noisome reptiles: here the largest bird of that species finds equal security in the gentleness of the natives. This creature, by far the stateliest of his tribe, is ludicrously termed the *adjutant*, from his erect posture, and military strut. He stalks about at a few paces distant from the natives; and if he stretch his long neck and bill, he nearly equals them in his tall and portly figure. Toads, serpents, lizards and insects, are his food; of which he is remarkably voracious, being endowed with a stomach of very strong digestive powers. The soldiers about the cantonment sometimes sport with

his voracity, at the expence of his quiet : a piece of meat, fastened by a rope, and a stake to ground, is thrown out to him : this he soon follows ; but when he attempts to retreat with the meal, he is held by the rope, till he submits either to captivity, or disgorge his food : to an animal so voracious, this alternative is cruel.

AGRICULTURE OF THE DISTRICT, AS AFFECTED BY  
THE GANGES.

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*Rajahmahl,* 1797.

THE more frequently you examine the operations of the Ryut in Bengal, the more fully will you be convinced of their inefficacy; either for the soil of this country, or perhaps of any other. We have here witnessed the effects of four ploughings upon a field newly opened from the *sward*. In an uncultivated state, the soil of this province becomes remarkably firm and tough; it consists of a mixture of earth, so closely interwoven with the roots of grass, as to form a kind of matting. A very strong team of cattle would probably be put to a stand by the strength and cohesion of these numerous roots: the Bengalee plough scarcely makes any impression at all perceptible, on first passing over it; and it would make still less, were it not for a precaution generally taken here in breaking up new soil.

ON

ON occasions of this kind, the long coarse grass called jungle by the natives, is set fire to, and completely burnt off, before the commencement of ploughing. This not only lays the surface bare, but gives some degree of friability to its exterior, which admits of those slight impressions which subsist after the plough. Five or six stirrings, if so they can be called, are scarcely sufficient to produce the appearance of a mould: the large clods upon which, proving invincible to the plough, are next attacked with an instrument intended for the purpose as our roller.

THIS exactly resembles a ladder of about eighteen feet in length; and is drawn by four bullocks, which are guided by two men, who stand upon the instrument in order to increase its weight \*. This implement, like the plough, produces only a slight effect; several applications of it are necessary upon the same surface, before any thing like a mould can be produced. Thus days are consumed, and endless labour lost, upon a small piece of ground, which the same hands could have completely subdued with the spade in one half of the time.

IN this district, the long grass, called jungle, is more prevalent than I ever yet noticed. It rises to the height of seven or eight feet, and is topped with

\* The ordinary substitute for the harrow, on tender soil, is a branch of a tree.

useful white down, resembling a swan's feather.

The mantle with which nature here covers all the cultivated ground, and at once veils the indolence of the people, and the nakedness of their land. It has a fine shewy appearance, as it undulates in the wind like the waves of the sea. Nothing but greater variety to its colour, prevents it from being one of the most beautiful objects, in that rich store of produce with which nature spontaneously supplies the indolent natives.

THE crops are here finely diversified with the castor oil plant, *Ricinus Palma Christi*: this is an excellent medicine; but the quantity raised far exceeds what is necessary for medical purposes; it furnishes an aromatic oil. There are some other flowering shrubs which I shall afterwards more particularly specify.

The Indian Corn, Doll, Kelai, and Mustard, make still a part of the crop, as well as the more common articles of rice, mulberry, and the indigo plant. In variety of produce, the Hindoo probably equals, if he does not surpass the English farmer; and this is perhaps the only point on which you can justly give him a preference.

THERE is perhaps one situation in which the difference between an European and Hindostanee plough, is not greatly perceptible; and that is where a field is ploughed while it is covered by water. The work produced is then concealed by its surface; and  
more



more nearly resembles the operations of a potter preparing and *setting* his clay, than the cultivation of a field : many fields of rice, however, are not tilled, but planted in this condition. The means of performing it is the following :

THE farmer previously sows a <sup>very</sup> thick crop of rice. After this crop has risen to <sup>the height of</sup> six or eight inches, it is carefully taken up <sup>with the roots</sup> at each stalk. In this state it is <sup>laid</sup> upon the field under water, where it is planted, by dropping one or two together in each space, and others at equal distances, till the whole field, or rather sheet of water is completed. The means used to sink it to the bottom, so as to secure it a proper root, are at once simple and ingenious : a small ball of clay is formed around the root of each stalk, to carry it perpendicularly to the bottom, and to secure it nourishment, till the roots, by spreading, produce a more liberal supply. Such crops may be tedious in their preparation ; but I am informed that they generally compensate the trouble by their abundance.

RAJAMAH is still distinguished among the villages of Bengal, by having formerly been the residence of the Rajahs of this rich province, and afterwards of the Mahommedan viceroys. The ruins of this spacious palace are still partly standing ; and from the apparent strength, and durability of the materials, might have continued entire for ages, had it not

not been for the irresistible encroachments of the Ganges.

ON many occasions the Hindoos pay dearly for their veneration of this river: whole villages are in one season, perhaps in a single night, undermined by its stream, and buried in the water. This has at last been the fate of the palace of Rajahmahl, after it had stood for ages one of the greatest monuments of magnificence of which this part of India can boast. The outer walls were from seven to fourteen feet in thickness, and their foundation laid twenty below the surface of the ground. The soil contains a mixture of granite rock, which is seldom to be found in the plains of Bengal. But the wisdom which dictated these precautions, and the strength of the fabric, have all been overpowered by the force of a stream which has ever been irresistible, where it directs its hostility.

THE palace of Rajahmahl is equal in extent to Windsor, but is greatly inferior either in antiquity or the state of its repair. Its empty halls, marble parlour and half decayed vaults, still present images of its former magnificence; which cannot be viewed without a certain degree of veneration and respect: the despotism of the East is great even in its ruins.

ON the opposite bank to Rajahmal are the remains of the ancient city of Gowr, or Luchnuti, said to be fifteen miles in length by three in breadth.

There

There are hardly any buildings standing at present ; immense mounds of rubbish and brick dust is all that now remains of that city, probably one of the largest then in the world. Corn fields and jungles are making gradual encroachments even upon the last vestiges of the grandeur of Luchnuti, the former capital of Bengal.

THE conquest of Bengal by the Mahomedans was completed in 1595. It has ever since, till our times, remained under their dominion. The antiquity of the palace of Rajahmahl is apparently much more remote than the reign of Aurengzebe, to whom it is ascribed ; but in India the decay of all buildings is rapid. Two hundred years is comparatively a short period to that of many of the family seats in Europe.

THE Mogul governor, to whom the province is intrusted, held his court originally at this place. Since the year 1718, it has been removed first to Decca, and afterwards to Moreshedabad, a large town about an hundred miles above Calcutta. There the present descendant of the ancient Nabobs is kept upon an annual pension of sixteen lacks of rupees. He still keeps a considerable retinue of infantry and cavalry, who accompany him with all the parade of royalty as often as he makes excursions into the country.

THE important post of Rajahmahl, and the government of Bengal, were occupied for some time by the ~~son~~ of the Great Mogul. They frequently misapplied both the treasure and the force entrusted to their charge, and raised disturbances in the empire. Governors were next chosen, of less personal influence, and more dependent; who might occasion less alarms to the court of Delhi. These persons were equally remiss in transmitting the tribute of this province to the Royal treasury: their abuses were carried to so great a height, that the Emperor unable to pay the Mahrattas the sums he owed them, authorised them in 1740 to collect it in Bengal themselves. For ten years three savage armies of that warlike people ravaged this rich province, and carried off all its wealth.

FROM this source the present waste and uncultivated state of this fine province, must certainly be in a great measure ascribed. The short period which it has remained in our possession, has been more tranquil than any it probably enjoyed for many centuries before; but this period has been too short to dispel that gloom of desolation which had so deeply overcast this fertile kingdom.

EFFECTS OF THE GANGES ON THE AGRICULTURE OF  
BENGAL.

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*Ganges,* 1797.

SOME of the disasters of Bengal, are imputable to the river ; for the Ganges, though unquestionably a source of much wealth and fertility to a vast extent of country, is also at times the dispenser of mischief, and the cause of famine, the most serious calamity of Bengal. This season, from a deficiency of rain in the upper parts of the country, the waters have not risen to their usual height ; those low-lying rice fields, of whose fertility they are the principal cause, from want of their usual stimulus, are certainly deficient in crop, and serious apprehensions are begun to be entertained of the supplies for another year. A single bad season is not of itself sufficient to produce a real scarcity of grain, so abundant in general are the resources of this country ; but unfortunately the

the very report of a defective crop sets to work all the robbers and speculators in the country.

No movement of this great river is uninteresting to the Bengalese peasantry : if when he subsides he causes distress ; when he unusually overflows he is equally detrimental, and tremendous. Last year, at the period in which I now write, whole districts were buried under water for several feet ; and you might sail for many days over corn fields, from which the grain was either swept away or destroyed : cottages, and whole villages were surrounded ; and many of the native huts were laid in ruins, along with the owners, where they could not make their escape in boats. The destructive ravages of the last season were however followed by no general scarcity : the abundance of one district made up for the loss in another ; and amidst the general plenty individual distress is easily overlooked, or soon forgotten.

EVEN in its ordinary state, the river is an expensive instrument of fertilization, and internal commerce. The ordinary channel necessary to carry along the usual quantity of water discharged by the river, includes a waste of many thousands of acres, which, during the dry season, are so many dreary sand-banks, miles in extent, which are drifted by the winds, to the annoyance of every living creature in their vicinity. Nor is this all ; the soil of this province is a dark, sandy loam, fourteen, and in some places twenty feet deep ; which offers but feeble re-

stance

sistance to the constant action of such a stream of water. Wherever a bank of such materials is opposed to the current, it is constantly eating it away; large portions of the soil you hear as you pass along, falling with a loud noise into the water; and if your boat happens unfortunately to be carried by the stream under one of these banks, you are in danger of being buried under its weight. It is true, indeed, that a portion of land, equal to that destroyed, is beginning to appear on the opposite shore; but this is merely a bed of barren sand, which the progress of vegetation, for many years, is incapable to cover with sufficient soil for the purposes of husbandry.

THE changes produced on the province of Bengal by the constant action of so immense a river, during the lapse of the many centuries which it is known to have been inhabited, must be far greater than can at first be imagined. There is unquestionable evidence, that the whole mass of soil to a great depth, over many hundred miles, is a congeries of clay, sand, earth, and vegetable substances, washed down from the vast ranges of mountains in the interior of Asia. In this operation, however, it has been powerfully assisted by the stream of the Bharampooter, a river of equal magnitude, which rises on the same ridge of mountains; and though divided in part of its course from the Ganges, to a distance of not less than two thousand miles, it again approaches it, and for several hundred miles towards its termination, waters the same plains. That the provinces of Bengal have been

been gradually formed by materials deposited by these great rivers, appears from the nature and strata of the soil, and the present state of the lower part of that kingdom.

THERE have been found at the depth of twenty, or thirty feet, the wreck of boats, their anchors, and other implements, which seem to have been sunk in some remote period, when the soil was lower, or when this vast plain made a part of the sea. Shells are frequently seen when you penetrate deep into the ground, which appear to have been formerly deposited by the sea. Rotten wood, and vegetable matter, seems every where to constitute a part of the soil; which to a great depth is of so loose a texture, as seems to evince its origin to have been mud deposited by water.

THAT extensive and dreary tract, called the Sunder Bunds, consisting alternately of jungle and stagnated water, which lies between the Hoogly and Chittagong, an extent of near three hundred miles, seems so lately formed as scarcely to be habitable, from its low position. It already furnishes fire-wood for Calcutta, and small timber for domestic uses: the time seems to approach when it will be cleared, and brought into cultivation; a time when the tigers and boars, its only inhabitants at present, shall give place to man, and yield up to his dominion a new territory, equal in extent and fertility to either of  
the



the three kingdoms that compose the Empire of Britain in Europe.

SOME small attempts have, I am informed, been already made to cultivate this inhospitable waste, and with no unfavourable prospect. But land almost in every part of India is so imperfectly occupied, that new acquisitions are of but little value, even though near the capital of our possessions, and still nearer to the sea. By some it is deemed a matter of policy to have a desert of that extent lying between us and the only point of attack from an European enemy. But to lay waste the surrounding territories, has never yet proved either a secure or a lasting defence to any nation : maintain a force adequate to your protection, and your enemies will respect your power ; whereas the dread or difficulty of marching through a desert will readily at one period or another be overcome, if beyond that they are assured of victory. Should our naval power hereafter become decidedly inferior to that of any other European nation, the deserts of Chittagong will soon be found pervious to that nation, and will assuredly fail to secure to us the empire of India.

CULTIVATION

## CULTIVATION OF THE OIL PLANTS.

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*Chandernagore,* 1797.

No inconsiderable part of the crop in Bengal is applied to the production of oil: this article is not only in more general use than in Europe, but is also consumed in much greater quantity. The natives very commonly use it as an ingredient in their food: they burn it in their lamps; and they apply it as ointment for the skin. In the last mode of application, it lubricates and softens the tegument, when parched by the sun, and seems to be a powerful protection against his rays. It was this manner of using it, to which the Jews were accustomed, and found so refreshing: if wine made their hearts glad, it was oil that made their faces to shine. In illustrating the delightful and happy effects of mutual love, one of the sacred poets compares it to ointment poured on  
“ the

“ the beard,” copiously and overflowing the whole body, to the “ skirts of the garments.”

For the supply of this favourite produce, several plants are here cultivated ; Mustard, Flax, the Ricinus Palma Christi, or Castor Oil plant, the Cocoa Nut tree, and many others.

THE mustard is the same with that which grows in Europe, but weaker in quality ; a circumstance which renders it so insipid to Europeans, that considerable quantities are brought from Europe for the use of the table. After the ground has been sufficiently reduced for this small seed, it is sown broadcast, and gently covered in with a harrow, or by scratching the mould with the branch of a tree. After this preparation the crop sown makes its appearance seemingly in great abundance, and one of the most beautiful to the eye which the country affords.

THE most luxuriant crops I have observed of this plant, were upon the banks of the river. When the stream subsides, in the month of October, large banks of dry and sterile sand are left in some parts, which the cultivator not only cannot turn to any account, but which prove by blowing or drifting, an annoyance to the adjacent fields : in other places, the stream subsiding, leaves the farmer a more valuable present, in those large strata of soft mud, which probably constitute the richest of all soils. It

is upon these that he sows his mustard ; and there too he commonly reaps the richest crops, without any cultivation at all ; for all that is necessary is to cover in the seed, by drawing a branch over it, as already mentioned.

Another expedient for the production of oil, is growing the, *Sesamum orientale* ; a plant somewhat resembling hemp ; but of a clean and semitransparent stalk, with a beautiful flower. So gaudy is the appearance of this crop, when in blossom, that you would at first imagine it had been cultivated for show, rather than use : and the fine aromatic flavour it diffuses, tends, on a nearer approach, rather to confirm, than remove your mistake. According to the account given by the natives, the oil produced by this vegetable, is that principally used in food. Its aromatic quality probably assists in preserving its sweetness, and must certainly add much to its relish

THE mode of expressing oil from the seeds of the two foregoing plants, is by putting them into a large mortar, the pestle of which is turned by a bullock continually driven round the floor of the barn. The operation is nearly similar to that of bruising the sugar-cane.

ONE particular with regard to the crops upon the mud banks, struck me as deserving notice from its so nearly resembling what is said of the cultivation of some parts of Egypt, bordering on the Nile. The crops,

in both instances, may be said to be spontaneous ; the flatness of the surface, too, is another point of strong resemblance. Water introduced at one corner of these banks of mud, may, by means of small furrows, be conducted to every part of the field. For making such a slender aqueduct, hardly any instrument is requisite ; the native, with his fingers or his toes, can conduct the stream. Such expressions in Scripture, as, “ I will water thee with my foot ;” which, to an European, appear perfectly incomprehensible, acquire, here, an obvious significance, and admit of an easy explanation.

The Cocoa-nut Tree, one of the most picturesque, as well as the most useful, in the tropical regions, must not be omitted, in giving an account of methods practised in Bengal for procuring oil. In the forest the cocoa nut tree claims patrician rank : it is tall, perfectly straight, and rises perpendicularly the whole of its length, without a branch. On the top, it is crowned with a number of large branch-like leaves, which spread around in all directions, and are attached to the sides of branches so slender, as to resemble the stalk of a leguminous plant, rather than parts of a tree. At the roots of these branches hang the large nuts so well known in Europe, that they need no description. The milk with which they are filled is palatable, and to the natives wholesome. The edible part of the fruit is closely attached to the inside of the shell, and to stomachs only habituated to vegetable diet it is very grateful, as well as nutritive :  
both

both the fruit and juice, when taken in quantity, have been found hurtful to Europeans : the latter, when allowed to remain in the nut till fermentation takes place, is intoxicating : some of the king's troops lately arrived, have, it is said, been much injured by venturing upon too liberal draughts of it.

THE stringy covering of this nut, bears a strong resemblance to oakum, and is, I am informed, sometimes used for the same purposes. It affords also a material for coarse mattings, and cables of good quality. The shell of the nut contains a very considerable quantity of a pure aromatic oil. The method of extracting it is by means of the common oil mill : a machine which illustrates the simplicity and rude structure of all the Hindoo implements of husbandry\*. The Koalhoo, an oilman, is reckoned an impure person, and his shop a nuisance like a dram-shop in Europe, by the Institutes of Menu. The sugar-mill, is little different in its construction : it consists merely of a large log of wood fixed in the ground, and hollowed out at the upper end, to receive a large mortar, which is turned by a couple of bullocks.

AMONG the oil plants, the Mahwah, or Mawa, holds a distinguished place ; its Sanscreeet name is Madhuca, and belongs to the class of Polyandria monogynia of Linnæus,

\* See the Representation, Sect. I. No. 38.

Linnaeus, but of a genus not described by him†. “The flowers of this tree (says Mr Hamilton) are of a nature very different from those of any other plant with which I am acquainted, as they have not in any respect the usual appearance of leaves; and I, like many others, had long conceived them to be the fruit of the Mahwah.” When prepared by drying in the sun, they resemble dried grapes, both in taste and flavour.

THE fruit, strictly so called, ripens in May, and drops in June; when the pericarpium commonly bursts; and when it does not, the seeds are very easily squeezed out of it. It is replete with a thick oil, resembling ghee; and being cheaper, the natives often mix it with that article. They use it for the same purposes as butter, or ghee, in their common food, and fuel for lamps. It is also regarded as a salutary medicine, and applied externally to wounds, and all cutaneous eruptions. From not being properly clarified in its first preparation, it is apt to acquire a disagreeable taste, and rancid smell; but even in this unsound state, as well as in its original form, it is exported to Patna, and other districts of the low country.

THIS

† For a full description of the Mawca, the reader may consult the Asiatic Researches, Vol. I. page 200. in a paper by Lieut. Hamilton.

THIS tree in the spring season, is replete with a gum, which may probably be found to serve many useful purposes ; and the wood must be very serviceable in building, if it be true that it is not liable to be eaten by the white ants. It will grow in the most barren grounds, even among stones and gravel, where there is hardly any appearance of soil. It does not, however, refuse a richer soil ; for Mr Keer has observed some at Buxar, where the soil is better, that were much taller, and more thriving, than in the poorer soils of Ramgur.

WHAT is peculiar in the Mahwah tree, it does not require much moisture ; but seems to produce nearly as well in the driest as in the most favourable years ; and in every situation : it is, therefore, admirably fitted for the convenience of the inhabitants of these hilly districts, which are peculiarly subject to long and severe droughts during the hot months.

THE oil-plants, and particularly the Palmachristi, occupy a great proportion of the land and labour of the farmer ; which, by the more general culture of the Mahwah, might, in all probability, be spared for other purposes. The far greater part of the hilly districts, seem hardly fit to yield any other useful production : yet, notwithstanding its utility, and the vast quantity of ground only fit for its production, Mr Hamilton observes, that you very seldom see this tree in an early state. Every where full-grown trees are seen

near



near the villages : a proof, that many more have been cultivated in former times.

A good Mahtwah-tree will yield 300 weight of dried flowers, of the value of two rupees : of the seeds it will yield about 150lb. producing 50lb. of oil, worth, in the cheaper years, about two rupees. Allowing one-half of this to be the average produce of a tree, and with careful cultivation it might be more in the space of ten or fifteen years, an immense additional subsistence, might be raised for the inhabitants, and a considerable revenue to the Zemindars, and to government, upon lands little better than a desert, yielding at present nothing either to the farmer or the state.

THESE ideas are the more plausible, when we consider the great difficulty of raising many of the oil crops, particularly the palmachristi, which grows to the thickness of a man's arm, and must be cut down with an ax, instead of a fickle. When this forest-like crop is removed, a new process, that of grubbing up the roots with the hoe, is necessary before the ground can be submitted to cultivation. This operation resembles the grubbing of *whins*, and must be equally difficult and expensive.

THE CULTURE OF THE INDIGO PLANT,  
INDIGOFERA TINCTORIA.

.....

*Kissengunge,* 1797.

My stay at this place, and my progress towards it, during a journey of three hundred miles, have afforded some opportunities of examining the culture of the indigo plant, and the process of its manufacture. The name of this drug seems to imply that it was known anciently in Hindostan, and Tavernier mentions it in his time as common; in fact the Romans were supplied with it from this quarter; but after the discovery of America, Europeans began to cultivate indigo there, and engrossed the whole market of Europe. No competition can probably long exist between them and the natives: their enterprise, skill, and industry, soon procure them a decided advantage. The Indians, however, save much in capital. They carry on the manufacture without the

the expence of any one house whatever. The plant is steeped in large jars in the open air. .

THE late rapid extension of the indigo trade is to be ascribed to that spirit of enterprise which distinguishes every class of Europeans, who venture to purchase independence at the expence of a distant voyage, and the risk of a hostile climate. It was at first undertaken from the general motives of adding to the industry of the country, and of improving their private fortunes. Any project, even of moderate plausibility, had, in such hands, a certainty of being commenced at least with spirit and activity.

ACCORDINGLY, for several years, during the late peace, the manufacture of indigo was begun with ardour, and attended with considerable success. But it derived its complete establishment and stability in India from a source which, at that period, was altogether unforeseen; the devastations in the West Indies, and the Spanish war. At the beginning of this undertaking, and during the inexperience of Europeans; added to the unskilfulness of the natives, this article had to enter the European market in competition with the French and Spanish indigo in the height of an abundance, that arose from extensive capitals, and matured experience. In such unpromising circumstances, the introduction of a new manufacture into India could not have been successful, had the execution of it fallen to less able hands.

At length that spirit of Republican anarchy, which in Europe had been so fatal to life and property in every district which it pervaded, reached the West Indies. It has there been attended not only with the usual conflagrations, murders, and rapine; but by putting an end to all industry, it seemed to rob the soil of its produce. The large and populous island of St. Domingo, that formerly yielded a produce nearly as great as that of all the rest of the West Indies, has been almost wholly destroyed by the too ardent heat of this new fanaticism.

THE exportation of indigo, as well as of every other produce from this island, must, for many years, prove inconsiderable. In the mean time, the culture and manufacture of this plant has attained to such a degree of perfection, that no future efforts of the French cultivators will ever place them on the same advantageous footing.

A greater quantity of indigo has, for some years past, been produced within the Company's territories than the supply of the European market ever did, or perhaps ever will demand. The price of the article has accordingly fallen, and while the same superabundance continues, it must fall. The ardour of speculation has outdone its end: and much capital must be unprofitably sunk, till the supply becomes proportioned to the demand; and this branch of industry, at present overstrained, resumes its posture on the general level with every other.

A great number of indigo works have stopped, on the failure of their owners: the consequence of this has already been a diminution of the quantity brought to market; and an increase of the price. Such as have stood out this difficult period, may perhaps succeed better than if no embarrassment had been ever felt.

INDIGO, from the very nature of the commodity, must always be limited in its demand; since the increase of manufactures in Europe can only augment it to a certain extent: when, therefore, the quantity exported from Bengal, small in its commencement, increased rapidly to the amount of two, three, or four millions of pounds annually, as it is said to have done for some years past, the price must inevitably fall.

THE stagnation of the sales in Europe; the failure of remittances from that quarter; and the consequent alarms and embarrassments of the indigo traders here; are the natural result of the excess in the quantity brought to sale: instead of occasioning surprise among the parties concerned, they should have expected it; and instead of foreboding the overthrow of this manufacture, it affords a very strong proof of its prosperity.

ONE circumstance which renders this country peculiarly fitted for the culture of indigo, is the immense tracts of land that are at present waste, or under

der a very imperfect cultivation. The weed manufactured at one complete work, requires several thousand acres to raise it: and in this respect India offers a field for the cultivation of it far more extensive than the islands of the Western Archipelago.

~~The~~ most general method adopted by the indigo manufacturers for procuring the weed, is agreeing with the natives for what quantity of the plant they can produce, and bring to the work, at a fixed price. One half of the money must be paid them in advance, to enable them to subsist during the culture of the field, and the growth of the plant, till fit for use. No undertaking, however small, can be begun by the Ryut. He has no stock, and cannot proceed a single step without immediate assistance. The produce of an acre of ground tolerably productive, does not yield, upon an average, more than from six to ten pounds of indigo, which, at the late prices, leaves a very inconsiderable sum for the rent, labour, and seed; after defraying the interest of capital, and the wages of labour necessary for its manufacture.

It is probable that the plant, like every other in India, is less productive than that raised in the other countries. This circumstance I have already had frequent occasion to notice; and if it does not take place in this instance, it will prove a departure from the general analogy that nature has established between the Asiatic and European plants.

IN this country the price of labour is various; from one rupee per month, to four. I have been informed that the late rage for the cultivation of this plant, has in some provinces contributed considerably to raise it. The stop put to the sales in Europe, will soon diminish the quantity produced, and probably reduce the wages of the labourer to ~~their~~ former standard; a circumstance intimately connected with the prosperity of the country.

WHEN the wages of the labourer are higher than his necessary support requires, he is found willing to work only a part of his time; and the quantity of productive labour is proportionably less over the whole country. The circumstances of the poor are not benefited by the alteration: they are oftener idle than before; and when idle they are not always innocently employed. The great advantage India possesses over almost every country, lies in the cheapness of labour, which enables it to afford its manufactured produce at a rate so low, in all foreign markets, as has hitherto defied competition.

As matters have hitherto stood, the labour of the Hindoo is reckoned only a sixth part of that of the African negro: and some important consequences are likely to result from this circumstance, as soon as a fair competition shall take place between other articles of produce of the East and West Indies. The wages of labourers at this branch have been at two, three, and four rupees per month: small as this may appear,

appear, it is a large sum, when compared to what is given to many of the hands employed in the manufacture of cotton: many of these, it is said, labour for a sum which hardly equals three farthings of our money.

~~11~~ AFTER the indigo plant has been raised and carried to the work, it is put into a large vat, filled with water; where it is allowed to remain a sufficient time to extract the colouring matter, by undergoing a fermentation. The heat of the weather must determine the number of hours necessary for this purpose; as it does with us in the *steeping* of flax and hemp.

It is observed, that the longer the plant continues in a state of fermentation, the greater is the quantity of indigo produced: but it is heavy, and coarse in quality. Of late the finer indigos only have been found marketable; and this has obliged the manufacturer to improve the fineness of the commodity, by shortening the period of fermentation.

THE precise time of letting off the water to produce the greatest quantity, and finest of the material, requires a minuteness of observation which experience alone can teach. Water thus impregnated with the colouring matter, and drawn off from the vat into another large vessel, is then beat by the natives, or rather churned, till it assumes a muddy and turdled appearance. In this part of the process, another effort of discernment is necessary, to discover when the colouring



colouring matter is sufficiently disengaged from the water to allow it to subside wholly to the bottom of the vessel.

AFTER the water has remained long enough to permit the deposition of the indigo, it is then drawn off, and the commodity is dried, and packed up for the market. That we are not yet perfectly acquainted with the niceties of this process, appears pretty evident, from the different results in circumstances apparently the same. Let part of the same plant, that was manufactured yesterday, be, to-day, infused in the same water, and heated as nearly as possible in a similar manner, the quantity and quality of the produce shall probably turn out very different.

THE state of the weather has invariably an effect upon this manufacture: during a dry season, the plant is always richer, and the produce more abundant. That which has grown on some soils, is much more valuable than the produce of others. The history of the indigo plant corresponds in these particulars pretty exactly with that of many other vegetables; but in its uncertainty as a productive crop, it far surpasses them all. A planter, whose crops to-day are rich and abundant; whose expectations of a profitable return, seem perfectly secure and reasonable; may awaken to-morrow, to behold all his hopes completely blasted: a storm of wind, accompanied with rain and large hailstones, as completely ruins his crop, as if it had been devoured by the locust. From this latter

latter calamity the indigo planter is not exempted in any part of Bengal. At the period I am writing, the newspapers announce the destruction of large fields of indigo all over the districts of Patna and Benares. The fluctuation of the European markets had, for some years past, added greatly to this uncertainty of the condition of a planter: the state of his finances somewhat resembles that of a gamester; and it has, of late, been deemed equally precarious to lend him money.

AFTER all these disadvantages attending this branch of business in India, it seems too firmly established ever to be overthrown: the most discerning merchants are, on the contrary, looking forward, with some certainty, to a period when, from its quality and cheapness, the Bengal indigo will preclude all competition in the market of Europe.

THOSE who contend that the prejudices of the Hindoos, and their attachment to custom, will forever prevent all improvements in their agriculture; or preclude the introduction of any new branch into their manufactures, carefully conceal the history of the indigo plant; and the culture of the potatoe. Opinions merely theoretical are ever best supported by ambiguous facts of ancient date; or subtilty of argument: the rapid introduction, and the prosperity of the indigo manufacture, presents facts too recent, and too notoriously insurmountable, to render this opinion tenable by any person who candidly weighs them.

them. If in one or two particulars we have undeniably benefited the natives, it requires no great stretch of apprehension to conceive, that, by repeated attempts, still other methods may be devised of adding to their comforts, and increasing our own.

. CUCUM.

## CUCUMBERS AS A CROP—WANT OF ARTIFICIAL GRASSES.

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*Mahungunge,* 1797.

THIS passage of country displays a greater abundance and variety of esculent plants, than I have elsewhere observed. The different species of the cucumber are much more numerous than in Europe. Here whole fields are planted with them; and from the rapidity of their growth, and their facility in propagating themselves by creeping along, and pushing down new roots, the field soon becomes completely matted. No other crop can succeed this vegetable till its *baum* is stripped away, and the soil laid bare. Were the slender plough put into it, before this operation, it would be choaked by the immense quantity of rubbish upon the surface.

THIS crop, which the Bengalese call *rumbur*, is not very grateful to the eye, especially when the

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leaves begin to decay, as they do at present; but if not beautiful it is extremely useful; for you daily see the natives using it as a curry stuff. It would indeed perhaps be easier to enumerate the esculent plants they reject, than those they admit into that standing dish both of the Hindoos and Moors. It is a miscellaneous composition of leaves, cucumber, onions, potatoes, and in short, of almost every plant within their reach.

THIS they devour with much avidity, and in great quantities: their partiality for it seems to resemble that craving which our countrymen discover for *hotch potch*; another multifarious mixture of every vegetable in the garden. A species of cucumber, met with in gardens here, is from eight to ten inches long; a very shewy vegetable, but remarkably soft, and nauseous as a dish at table.

THE water melon, which I have elsewhere mentioned, is here of incredible size; its stalk leaves and blossoms form a delightfully variegated matting, with which most of the native cots in this village are entirely covered. A village decorated in this manner, gives an European an idea of plenty, and of luxuriance of vegetation, which pleases the imagination; because it relieves it from those impressions of poverty, which the nakedness of the people, and the meaness of their houses, are apt to create. The habitation of a Hindoo, mantled with this plant, and loaded with its enormous fruit, possesses an air  
of

of plenty, and of rural simplicity, of which no European cottage can boast ; for the largest fruit with you would appear beggarly if compared with this melon. This fruit the natives turn to better account than decoration ; it affords them a comfortable refreshment ; upon European tables it is chiefly prized as an article of shew ; as part of food it has never been in high estimation.

AMIDST such an abundant supply of vegetable food for themselves, the natives merit no commendation, in providing for their cattle. The common pasture is very miserable in quality, and often defective in point of quantity ; yet grass or straw is almost the only food of working cattle. I have here met with another frugiferous plant which resembles hemp, when about half its height. The grain produced by this vegetable, is called by the natives Kelai, and is given to the horses after having been boiled. This affords by no means a general supply ; for I do not remember to have once seen it in Calcutta, where the horses are kept with the greatest care of any part of India.

A European here continually regrets the want of artificial food for cattle ; and particularly that of the grasses ; without which agriculture can in no country be said to have attained half its perfection.

THE grass totally disappears in some places during the hot winds ; at that season horses are fed by cutting

ting the roots of grass below ground, which are washed, and afford excellent food. Artificial grasses would, perhaps, not outlive the hot winds, that fatal scourge of Indian pasture.

THE present time is, perhaps, the most favourable the English ever enjoyed for attempting the introduction of that improvement. From possessing the Cape of Good Hope, a supply of fresh seeds might be procured, with far greater certainty than immediately from England. The garden seeds from Europe, after a voyage of five or six months, are often so much damaged, as to prove altogether unfit for sowing: and grass seeds, from their peculiar smallness in size, must prove still more liable to this accident. Experiments, it is said, have been made of some of the artificial grasses of Europe in this province; but so feebly and ill conducted, as to decide nothing, either for or against their introduction.

THERE is hardly a doubt, that Lucern, Vetches, Clover, and Ryegrass, would prove abundant crops in the lower parts of Bengal; after discovering the proper soil and season for sowing them. Probably, the rapidity of their growth during the rains, would render them less nutritive than in their native soils; but even in that case, they would prove far superior to the present food, either of horses, or horned cattle. The truth is; Bengal is not more than half inhabited, either by man, or the useful animals. Whenever it arrives at its full complement of inhabitants, the  
present

present supplies will be found inadequate, and the introduction of grasses will then be set about as a work of necessity. So long as three or four rupees per month given to a grass-cutter, for each horse, will enable him to pilfer sufficient food for him in the neighbouring ditches, a farther supply is not perhaps very necessary: but what estimate are we to form of the number of horses in a country, where their sole food is the roots of grass picked from the tanks and ditches: what judgment are we to pronounce on the population of a province, where, in ordinary seasons, no art or sanction is necessary for providing the sustenance, either of man or beast?

It is unfortunate for this country, that almost every proposal for adding to the industry and comfort of the natives, meets with opposition and ridicule from a great proportion of the Europeans by whom its public affairs are guided. The exertions of the active and benevolent are, every where as well as here, a reproach to the indolent: but, unhappily, this is almost universally the vice of Europeans in India. In one or two instances only, do they show their usual activity, in accumulating money; or dissipating it, by extravagance. So far do they assume the character of the natives, that, whatever does not promise immediate gain or immediate pleasure, appears but of little importance.

It must, at the same time, be acknowledged, that some of the propositions of our countrymen, in favour



your of the natives, have provoked ridicule by their absurdity. It is related of a person, who came out with a very high appointment in the service; that, on first seeing the native females going down half naked, to bathe in the river, he expressed his hopes of beholding them, before his departure, dressed in gowns, stays, shoes, and stockings. Had this gentleman's ideas been carried into effect, his benevolent mistake must have proved a serious calamity. A native of either sex, in full European dress, feels all the restraint and awkwardness of a monkey; and, instead of being more comfortable, he is in danger of a fever, from bearing such a load. Yet still the dress of the natives might be improved: in the months of October and November, it is by far too light and partial. Perspiration suddenly checked, as at this season it often must be, affects their bowels with violent complaints, which carry them off in a greater proportion than Europeans. The most experienced physicians have at that period recommended additional cloathing. But so contradictory is this to the whole habits of the Hindoo, that it has hardly in any instance been complied with.

FROM the circumstance above hinted at, much unmerited ridicule has been thrown upon several gentlemen now in India, deservedly high in reputation. The dissemination of the silk manufacture into different provinces; the introduction of the bread-fruit tree; and that of the cochineal insect, afford no contemptible proofs either of the judgment with which  
their

their improvements were planned, or the perseverance with which they have been carried into execution.

HAD these gentlemen even failed in their attempts, they have the merit still remaining, of transmitting to Europe more extensive and accurate information regarding the condition of the natives of this vast peninsula, than any other persons of the present times.

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## THE CULTIVATION OF THE MULBERRY,

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*Jungipore, Oct. 1798.*

IN proceeding with a detachment of the army by the Hoogley and the Ganges, I had further opportunity of enquiring after the different sorts of crop, and produce of agriculture. The month of October is in Bengal one season for sowing and planting several kinds of crops, particularly the European grains : during this month the mulberry is planted with most advantage. After the field has, by frequent ploughings, been reduced to a proper tilth, furrows are drawn at the distance of eighteen inches, or two feet ; their depth from four to six inches. In these, small cuttings of the mulberry are planted, to the number of eight or ten in one pit. The longitudinal distance between two pits, is two feet, or nearly equal to the lateral distance of the furrows in which they are made. The earth after being well pressed down  
with

with the hand around the cutting; is then loosely scattered over their tops, and the work is concluded. This operation requires a number of hands; some ploughing; while others are employed cutting the small mulberry wigs into proper size; others carry them upon the field, and place the proper number at the side of each pit; while the operation of planting is begun at one side of the field.

IF the operations of the Hindoos in the field ever assume the appearance of activity or industry, it is at this period, and at such processes as this. The weather, to their feelings, begins to be cold; and some activity is necessary to repel its attacks. The plough too seems to perform something resembling husband-like labour: this, however, is owing to no superior strength of the implements or exertion of the cattle; but is solely to be ascribed to the greater softness and friability of the mould, after frequent stirrings.

NOTHING can exceed the beauty of the mulberry, when it first makes its appearance, in small clumps or stools, above the parallel rows of pits in which it has been planted. The soil being then clean of weeds, the mulberry leaves give a rich, green, and bushy appearance very grateful to the eye, on surveying a plantation of this kind. This plant is never allowed, in Bengal, to reach the size of a fruit-bearing tree, when intended for the silk-worm. It rises in a shrub like form, somewhat larger than a raspberry bush: it is then that the natives pick the

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leaves, and carry them to the houses in which the worms are fed for spinning. The care of the silkworm, the collection of its food, and winning the silk, are operations requiring no effort of strength, or bodily exertion, and on that account peculiarly suited to the genius of the indolent Bengalese.

If at this season of the year, he be put to labour too incessant and fatiguing to admit of his smoking his tobacco, he languishes, and should a fever supervene, probably expires. On the banks you will see sometimes two or three of them on the funeral pile at the same instant, and at no great distance from each other. The life of a native is here a short and chequered scene. He has frequently at the end of his career more cause, than the venerable patriarch Jacob, to complain that his days "have been few and evil."

THE growing of silk has been deemed a Chinese invention; but as there are large quantities of wild silk gathered in India, probably it has, like indigo, been supplanted in the European market by Italian and French silk. The export of Bengal silk is however still considerable, though in quality it is reckoned inferior to European produce. Perhaps this branch of agriculture never attained to any great degree of perfection; for we know from the Roman historians, after they had acquired their utmost extent of Asiatic territory, that this article continued invariably to bear a very high price in Rome. Its quality

lity too, was probably coarse, as it is at present ; at least the uniform tenor in which the natives conduct every manufacture, leads to this conclusion \*.

THE cause of the coarseness of Indian silks has not been so well ascertained as the certainty of the fact. No naturalist of any eminence has examined the nature of the insect sufficiently, to discover where the defect originates. It may possibly be owing to the excessive moisture, and heat of the climate, which communicates a watery insipidity to every vegetable production ; and which may, therefore, produce a mulberry leaf less nutritive than that of China or of Italy. The same cause may have enlarged the size of the insect itself, or produced such a relaxation of the parts employed in this function, as renders them incapable of forming a thread of the finest quality.

THE manufacture of this article in Bengal, is carried on to a considerable extent. Many expensive buildings have been erected for the purpose in different parts of the province. These are, in general, under the superintendence of Europeans ; for the natives, even when you continue to make them labour on their own account, carry it on invariably with little execution or dispatch. Their principal excellence consists in the small expence, and the inconsiderable capital with which they conduct their operations,

\* Vide Gibbon's Decline and Fall, &c.

rations. In this country, where the rate of interest is generally twelve per cent. and sometimes much higher, this saving of capital operates powerfully in their favour. There are, at this moment, many instances in every part of Bengal, of Europeans, who, by sinking an enormous capital in buildings, and implements, have incurred a debt, from which all their ingenuity, skill, and application, could never afterwards retrieve them.

THE success of a branch of manufacture, which affords labour and sustenance to many thousands of our fellow creatures, must be regarded as an interesting object; but there are some departments in this labour for which you could have no partiality. The houses in which the insects are kept, are infested with a noisome smell arising from the insects themselves, or their excrements, and rotten leaves: the heat of the stoves is an addition of no comfort in this climate. The populous village of Cossimbazar, celebrated for an extensive silk manufactory, has been, for many years, at least equally infamous, for the destruction of the lives of vast numbers of the natives. It must be acknowledged, indeed, that upon instituting an enquiry into the cause of this mortality, it did not appear to be solely owing to this cause.

THE investment of the Company in silks, amounts annually to a considerable sum: what is produced by private adventurers, and exported on their own account,

account, cannot be easily ascertained; but may perhaps be little inferior in quantity.

THE natives are in general bad customers even for their own manufactures. Their vanity and taste for shew exacts from them, however, a considerable sum for silk stuffs. Fabrics of this material are used in several articles of dress among people of rank of both sexes. Their silk fashions are remarkably expensive and elegant. The same taste is displayed in their shoes, which are made up of a very thick and rich stuff, embroidered in a splendid manner with silver and gold.

THE different articles manufactured in silk; their quantity, and the number of hands employed in them, shall afterwards be more particularly detailed.



CULTIVATION OF THE DISTRICTS OF MONGHEER AND  
PATNA.

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*Mongheer, 1798.*

THE agricultural operations put on a very different appearance here from what I have noticed any where in the flat country of Bengal. That large plain which constitutes this rich and extensive province, is bounded on the east by the Barrampooter; and on the west by the Ganges, or rather by the hills which confine it. A thousand branches and intermediate streams water the interjacent lands, which being uniformly on a level with them, imbibe moisture, and preserve perpetual verdure. On the exterior banks of these great rivers, the country rises into gentle hills; which, as you advance, swell into high mountains.

THE land towards the bottom of the hills being above the level of both rivers, derives no fertility from them

them in any season of the year. In these districts, industry supplies this defect of natural moisture. Towards the end of the rains the fields are well plowed in the ordinary manner: but before sowing the seeds, they are divided into little square plots, resembling the chequers of a backgammon table. Each square is surrounded with a shelving border, about four inches high, capable of containing water. Between the square chequers thus constructed, small dykes are formed for conveying a rivulet over the whole field.

As soon as the water has stood a sufficient time in one square to imbibe moisture, it is let off into the adjoining one, by opening a small outlet through the surrounding dyke. Thus one square after another is saturated, till the whole field, of whatever extent, is gone over. The fields watered in this manner, require a laborious preparation with the hoe, and even the hand, to construct the dyke and aqueducts: but their extreme beauty and fertility compensates for the labour.

THE fields in this neighbourhood are at present under this operation; and they resemble a flower-garden in neatness and beauty, rather than the coarse operations of husbandry. A great variety of leguminous plants, mustard, castor oil, as well as opium, barley, and other grain, are seen springing up in these little squares, in the greatest regularity, and without a weed.

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THE poppy for the opium is sown on this ground, which seems more than any other crop, to require a careful cultivation.

THE number of hands all busy in different processes of this work, gives an impression of the industry of the cultivators of those parts, which you in vain search for among the Ryuts of the plain.

THE very act of procuring sufficient supplies of water is itself laborious. It is here drawn from wells, several of which are dug to a great depth on the top of every swell in the field. It is raised in large leathern bags, pulled up by two bullocks yoked to a rope. The cattle are not driven in a gin as ours; but retire away from the well, and return to its mouth, according as the bag is meant to be raised, or to descend. The rope is kept perpendicularly in the pit, by a pully, over which it runs.

FROM the mouth of the well thus placed, rivulets are formed to every part of a field; which, in this season, becomes so parched, that a whole day may prove insufficient to water it copiously. The operation, however, must, at short intervals, be continually renewed, since no rain falls during the four ensuing months.

GRAIN in districts situated like Mongheer, must be raised at thrice the expence with that produced in the plain: to me, therefore, it appears unaccountable, that

that so much of the rich deep loam of Bengal, should be left in all the wildness of nature, while the rising grounds are cultivated at so much expence of labour, and that too almost in the same neighbourhood.

BUT all here is managed with activity, and persevering diligence. While the new crop is thus preparing in the field, the women are busy in the houses, grinding the former one in mills, and getting it fitted for the market, or for immediate use. Till this can be accomplished, it is kept in perfect preservation, by being heaped up in small round huts, constructed of reeds, and neatly thatched on the roof.

THE culture of the district of Patna is far superior to what you generally meet with in Bengal. For several miles around the adjoining villages of Bankipore and Dinapore, the fields assume the appearance of a rich and well dressed garden. Every part of the country is now beginning to be parched with drought; and here the operation of watering the fields is carried on with perseverance and spirit.

EACH well is supplied with a number of hands, who labour the whole day drawing water to supply the rivulets, by which it is conveyed through all the adjacent fields. The surface of the ground in this flat part of the province of Bahar, does not rise more than thirty feet above the level of the Ganges; and in many places its elevation is still more, inconsiderable. Hence the water in each reservoir is perhaps, not

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not more than two or three fathoms from the surface : and the means used for raising it to that height are extremely simple. Two long bamboos are raised upon a frame about ten or twelve feet, these are wrought like levers by a weight attached to one end, as the moving power which raises the leathern bags to the mouth of the well. A man's strength pulling down the rope is necessary again to sink them for each supply.

THESE erections you see at every two or three hundred yards as you pass along the road ; while the chequered fields on each side of it, put on a most luxuriant and rich appearance. The most common crops are cotton, dahl, and the castor oil plant : the latter rises to the height of a large shrub ; and shelters below its broad leaves the dahl, and cotton shrub. These three articles are frequently blended together, and their joint produce must prove very considerable, as they seem each an abundant crop.

BARLEY alone, or mixed with a kind of small pea, is also a very common produce in this vicinity. Very extensive fields are now preparing for it ; and there are many more where it is already sown, and has risen a few inches above the ground. This grain is exposed in great quantity for sale in the Bazaars ; but it seems not to be of equal size or plumpness with the growth of Britain. Behar must prove too warm a climate for this grain, as it certainly is found to be for oats. Wheat, however, is excellent  
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in quality, and is said to be abundant. Forty small loaves, about the size of our penny bread, are sold for a rupee; their quality is perhaps superior to what is generally met with in England. Wheaten bread is therefore much cheaper here than in Britain; though it be more expensive than any other farinaceous food, and therefore not generally used by the natives.

ALMOST every common article of food is here remarkably cheap; fowls from six to ten a rupee; and ducks at nearly the same price. Turkeys, though cheaper than in Calcutta, are six rupees each; a circumstance which seems to evince a degree of improvident indolence in the natives, bordering on stupidity. In this climate that bird is not so difficult to rear as it is in Europe. A woman therefore, who, in a year, could breed, and bring an hundred to the market, would secure an independent fortune to her family for the rest of her days: she would receive six hundred rupees; a sum which, at the common rate of interest, yields six rupees per month, an income sufficient for the maintenance of a pretty large family. From this, though you deduct a plentiful allowance for grain, there will still remain a sufficient profit to stimulate the indolence of any being but a Hindoo.

THE retail price of gram in the Bazar is only one rupee for sixty-four English pounds, or thirty seer; while rice and dohl are somewhat lower. These prices

prices are noted here, as the present season is neither remarkable for scarcity nor abundance ; and as the town of Patna is perhaps the most central part of our territories in this part of India, it must have an influence upon the whole.

DINAPORE, which lies about fourteen coss west of Bankipore, is a military cantonment built by the Company on the same elegant and magnificent scale with those at Berhampoor and Calcutta. It is so very extensive that every officer enjoys nearly three times the accommodation afforded by any of the barracks in England. The private foldiers are also provided with large and well aired lodgings ; but the troops belonging to the native battalions are quartered in small huts a little superior to those of the natives. To them, this instead of a hardship is a luxury ; for their former condition is not forgotten, when they were not lodged so comfortably.

At Moneer, about six miles farther up the river, the Company has also erected cantonments for cavalry, equally commodious. The concourse of Europeans at these two stations, and at Bankipore, has probably a considerable effect upon the markets ; for it is universally allowed that they are charged higher than the natives for every article. It is indeed the interest of all the black servants they employ in purchasing necessaries in the Bazar, that the price should be high, as in that case there is  
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more room left for their *dustour* \*, which is a deduction of a part of the price from the merchant on paying his bill, and is claimed by the servant.

FROM this circumstance, the Bazar prices mentioned above, are to be considered rather above than below the standing rates paid by the natives.

WHATEVER enhances the value of produce, necessarily rouses and invigorates the operations of agriculture; cultivation is accordingly very extensive in this district, and better conducted. The crops seem abundant; while many of the fields in the vicinity are adorned with excellent hedge-rows, interspersed with flowering shrubs, which give that peculiar richness and beauty to the scenery to be met with in tropical climates.

AT Bankipore, one of the suburbs of Patnā, the Honourable Company's civil servants reside. Their provincial court of appeal, its register and clerks; the zillah or criminal court; and the city court, with the commercial resident, collector, and other agents of the Company, compose a pretty numerous establishment, with liberal appointments. These Gentlemen, with the Officers of the King's and  
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\* Literally rendered *custom*, a perquisite of every black servant purchasing goods for his master.



Company's troops, constitute the society at Patna, from which private traders, not in the service, are excluded, agreeably to the etiquette of India, which has formerly been noticed.

## DESCRIPTION

DESCRIPTION OF THE CITY, AND THE AGRICULTURE OF  
THE DISTRICT.

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*Benares,* 1798.

IN our progress from Patna to Buxar, Gazipour, Benares, and Mirzapour, much cultivation, and a rich passage of country, presents itself to the eye of the traveller : at the last mentioned place, however, his approbation must cease : both sides of the Ganges a little way above that village, are subject to the Nabob of Oude, whose territories, in defiance of the bounty of nature, display an uniform sterility.

MIRZAPOUR is remarkable for the industry of the natives, who are here stimulated to exertion by a few active Europeans engaged in the indigo business ; in the manufacture of a very durable carpetting, and in the raising and exporting of cotton, with several other branches of trade, which are all conducted with much enterprize, and considerable success.

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THERE is here but little land employed in the culture of rice ; and the present season is not the period of that crop. The prevailing articles of produce are barley, wheat, and several species of the pea. A small quantity of flax is raised on the skirts of almost every field for the sake of oil ; its use as an article of clothing is not here understood. The most luxuriant and rich crop exhibited here at this season, is a mixture of the dohl plant with that of the castor oil and cotton plants. The two former rise from six to eight feet high ; and are nevertheless outstripped by the *badgerrow*, another meagre kind of grain which makes a part of this mixed produce.

THE barley is just coming into the ear, and is at present remarkably beautiful. Every field of it contains a mixture of gram or pease ; and at the distance of six or ten feet there is planted a beautiful yellow flowering shrub, used in dying. The operation of reaping, at which the separation of these different articles is made, must prove both tedious and complicated. The atmosphere which is here at present so cold, that fires are very comfortable, becomes so heated for three months after March by the setting in of the hot winds, as to destroy all verdure. Those fields which at present wave with luxuriant crops are then scorched like a desert, and are covered with clouds of dust. So trying are the hot winds to every vegetable production, that older European inhabitants seem to think it would prove destructive to all our artificial grasses. This, however,

ew, is a matter which ought to be brought to the decision of experiment, and not left to opinion.

TURNIPS, radishes, and a variety of greens and garden stuffs, are raised here by the natives principally for Europeans, and exposed to sale in the Bazars : where you find all the various produce of the country neatly put up in baskets, and ready to be served out in any quantity.

THE fort of Chunar is situated upon a freestone rock, several hundred feet high ; as it is provided with guns on that side it completely commands the river, though it is probably of no great importance in a military point of view ; but the prospect into the adjacent country from its summit, is one of the finest imaginable : below, the Ganges winds along in a magnificent stream : the woods, villages, and corn fields in all directions, form an admirable group ; while the distant hills on the south communicate a grandeur to the scene that is seldom to be found in any country.

WITHIN this fort the Company have large and well constructed magazines, in which is deposited a great quantity of ammunition, guns, carriages, and every kind of warlike stores. The town itself is a straggling collection of native huts, and European bungalows, without uniformity ; and spreading into the country several miles. At certain seasons of the year Chunar is oppressively hot, and said to be very  
Z unhealthy :

unhealthy: indeed the European and Mahomedan burying grounds are scattered in every direction, and occupy nearly as much ground as the town itself.

IN point of health, Benares must be still more hostile: the streets are only a few feet broad, confined with high buildings on each side, so that the rays of the sun can hardly penetrate the bottom of the lanes, which are impervious to wind, and covered with cow-dung, foul water, and every kind of filth. That the plague should occasionally break out in eastern towns is unavoidable: here it is unknown, though you are rather surprised how human beings can support life in such a noxious atmosphere.

AT Benares the number of Europeans is very small: a judge, register, collector, with a few civil servants, constitute the whole of the Company's establishment there; a few private merchants and planters make up the whole society. Of natives, however, the number is great; and many of the bankers are the principal creditors of the India Company, and possess immense fortunes. The poor in Benares are still more numerous, owing to the number of pilgrims who come from all parts to visit so sacred a place. In going into a mosque, thousands crowded around us, soliciting charity with an importunity I never before witnessed, and which I could not then resist. Hunger, wretchedness, and disease seemed

seemed to meet your eye in every direction: what increased our uneasiness was the impossibility of affording any relief to such crowds; where famished multitudes pressed forward to succeed such as you had sent away with a pittance of supply. It is not any scarcity, or any extraordinary degree of poverty that occasions this concourse of beggars, but the number of pilgrims who come from all parts for the purpose of devotion and charity: and wherever there is a fund for the poor, there will in every country be found a sufficient number to consume it: begging, hard as it seems, is still easier than labour; and where it answers the same purpose, that of subsistence, it will often be preferred.

THE celebrated seminaries of Hindoo learning in this place, have been mentioned by almost every writer on the state of Hindostan, and for that reason I entirely omit them, from a conviction that their fame has been raised far beyond the standard of their merit. They seem at present to be in a pitiful and languishing condition. The grand Mahomedan mosque built by the fanatical Aurengzebe, on the ruins of a Hindoo temple, has lately been repaired by Mr Hastings, and constitutes an immense irregular pile of building, with which I know nothing to compare it. There are certain libraries of Sanscreeet books, which are now accessible to Captain Wilford, Mr Wilkins, and other Europeans, who are acquiring a knowledge of that language; but it will probably soon be found that our hopes of acquiring knowledge

knowledge from that quarter have been to <sup>of</sup> Fan-  
guine.

OF the population of Bénares, I am unable even to form a conjecture: the streets are so narrow, and the buildings crowded to such a degree that you can have no conception of the number of people they contain: they are two, three, and four floors in height, which you seldom meet with in the dwellings of natives. The province, which obtains its name from the town, although sometimes roughly treated, since its connection with the British, is at present in a state of great prosperity, when compared with the districts north of it. So great is the ferocity, and state of desperation to which the Vizier's subjects are reduced, that they frequently make excursions, and plunder the neighbouring villages. Treated always with injustice and rapacity, they seem to have lost in a great measure their sense of right and wrong, and scruple not to behave to their neighbours in the same barbarous manner that their superiors treat them. A brutal *aumil*, on a farmer's inability to pay his rent, seizes all his effects, even his wife and children; and has sometimes been known to burn the unfortunate object of his vengeance in the flames. With such examples of ferocity continually displayed by their rulers, what can be expected of the people? they are strangers to every principle of justice and of mercy.

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WHEN employed in viewing the curiosities of Benares, I received a letter from London, acquainting me with the fate of the mission intended to be sent to this *mint* of heathen superstition: it seems the members of it were refused permission to sail for India by the Court of Directors, from an apprehension that they would mix politics with religion. In all probability the idea was just: persons incapable of observing a peaceable conduct at home, are of all men the most unlikely to propagate the doctrines of peace and forbearance in India. With regard to the natives, it is probable that their doctrines would have no effect whatever; that steadfastness of faith, or obstinacy in error, which enabled the Hindoos to resist every effort of Mahomedan zeal, is not likely to be moved by the mysterious jargon of our semipolitical divines. The instruction of youth is at all times worthy of attention; but I do not learn that this entered much into any of the plans adopted by these wise men. I have already, if I remember right, given you my ideas upon this subject; and I have only to add that I conceive this measure to be one of the most chimerical and visionary ever attempted. Happily for the projectors, they have been stopped at an early period of their progress before they had an opportunity of displaying the whole extent of their folly.

— WHAT impression the harrangues of a set of men entirely idle, and noted for their discontents at Government, might have on the civil and military servants



vants of the Company, I pretend not to say: ~~It~~ is probable that in this line their labours might not prove so abortive as in converting the Hindoos.

THE education given at Benares is chiefly instituted for the Brahmins; that of the common people is extremely limited, but to them highly useful, and obtained at no great expence. Almost in every village there is a person employed in teaching the youth to read and write. As few books are entrusted to the perusal of the great body of the people, the amount of their learning is to form the characters, and to read manuscript; and it is surprising how many, even of the lowest servants, are able to keep accounts. I have found a Mussulman capable of this who could not read a sentence of the Coran. Here writing and reading are taught at the same time; the boys are collected upon a smoq'h flat of sand, and with the finger or a small reed form the letters there, which they learn to pronounce at the same time. As often as the space before each scholar is filled up with writing, it is effaced, and prepared for a new lesson: thus the expence of both pens, ink, paper, and even a house, is avoided.

ON FARM MANAGEMENT IN THE DISTRICT OF BENARES

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*Benares, July 29, 1798.*

I AM abundantly sensible, that by persons of much practical knowledge of the subject, I must have been convicted of keeping too much to *generals* in my description of the Hindoo farming. The truth is, it is seldom safe for an European to do otherwise. There are few opportunities of getting a complete enumeration of facts from any farmer here: they are miserably poor, and ignorant: we are generally equally unqualified, by our want of language, to draw from them what little information they might be able to give.

FORTUNATELY I have met here with a very intelligent Soubadar†, in the Hon. Company's service; who,

† Ram Jeet Sing.

who, from his knowledge of the English language; has assisted me to meet, I will not say to overcome, this difficulty. His estate lies upon the Derghautic river; about 36 miles from Benares, and consist of 4000 Cutchia Biggahs, or 1500 pukka, equal to 500 acres. The annual rent he pays to government is 500 rupees; and according to the present mode of letting, his own gains should annually consist of 100 rupees, at present about 12 pounds of our money. Such are the profits of the farmer of five hundred acres to a man of rank who has under him several hundreds of Ryuts and tradesmen. Government is therefore, according to all our ideas, the proprietor; and this gentleman, who fancies himself the owner of an estate, is in truth a factor for the Company, with an allowance of ten per cent. for collecting its rents.

Thus you observe, that nine-tenths of all the rent of Bengal and the provinces constitute the revenue of the Company; who are, in room of the Emperor, the true proprietors of the soil. That so vast a tract of country, naturally the most fertile, should yield so small a sum as the known revenue, ought, beyond all I am able to write, to convince you of the wretched state of agriculture in India. Lands of a similar quality with those I am now giving you an account of, would, with the worst husbandry practised in any part of Britain, yield more than five times the sum!

Of this estate nine hundred pukka biggahs are under the plough: and the crops are barley, wheat, pease,

pease, cotton, sugar, mustard, flax, and rice. The quantity of grain applied as feed, is estimated by the seer, which is either pukka or cutcha, corresponding to the two kinds of square measurement. To a cutcha biggai. of wheat twenty cutcha seer of feed is the common allowance; while double the quantity, or 30 seer, of barley is the necessary proportion of that grain; and fifteen seer the ordinary allowance for a rice field.

IN some cases rice is transplanted, after its removal from the field in which it was sown. In such instances about three times the quantity of seed usually given is thrown upon a small space in the corner of the field: there it remains till it has risen about twelve inches in height; when it is taken up by the foot, and planted in the field which is then covered with about three inches of water. This is the grand season of business with an Hindoo farmer, when his concerns absorb those of every other man's belonging to his community. He has then a prescriptive right, established by the practice and usage of some thousands of years, to call out not only all the artists of the village, but their women and children, to his assistance, though the hurry of business should continue a week or two.

IN one of the Western Isles of Scotland, which you have seen, it is said that all the inhabitants turn out in the spring, and unite their labour in tilling the ground. In that mountainous spot the operation

must be performed with hoes, spades, or pointed sticks, because no cattle there can drag a plough. The bustle, jollity, and confusion which then obtains gives a fresh animation to the rustics, in this operation, which they in their jargon call the *Grand Powter*. Planting a rice-field near a village is the *grand powter* of the Hindoo peasants; when they display a degree of alertness and vivacity, which, for a while, overcomes the phlegmatic indolence of the race.

THE grain being thus planted, an additional supply of water is let into the field, to accelerate its growth, or rather to ensure its taking root. This water, after standing a few days, is drawn off, and a fresh supply let in; but the necessity of this measure I have not been yet able to learn. So rapid is the progress of vegetation in Behar, that the first harvest comes on in two months after planting the crop: the second is reaped in November, and having been planted in August, may easily succeed on the same field. This is commonly a finer species of rice, and constitutes the most valuable crop, upon the success or failure of which the circumstances of the farmer, and of the country, in a great measure depend.

By what I have here and elsewhere submitted to you, you will observe, that there are three harvests in this part of India; two of rice in the summer and autumn, and one in the spring, consisting of wheat, barley, and pease. Should, therefore, the improvident indolence of the farmer, an adverse season, or the hostili-

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ty of the Ganges, disappoint his hopes, he has still an opportunity, by new efforts, of retrieving his affairs—The season, a second and third time, not only invites him to the measure, but powerfully seconds his endeavours.

THE reaper has in this part of the country his labour paid for in kind: when employed in cutting the more valuable grains, as wheat and barley, he receives for his wages the twentieth sheaf; of the coarser kinds, he claims the tenth part. This tithing sheaf is selected by the reaper himself and the ryot alternately.

RICE and barley, with the various kinds of the pea, are, either separately or mixed, the grand support of the labouring poor. Wheat is raised and sold for the use only of the higher ranks; even barley is too expensive for their daily fare: and, for that reason, its flour is mixed with that of pease when used by the common people. Fried grains, ground by a hand-mill, day by day, and made into a kind of porridge, is held the most substantial diet a peasant can aspire to: this he may mix with vegetables and spices which are cheap. Even the finer sorts of rice are raised for the market, for it is of the coarser only that the labourer's earnings will allow him to partake.

SUCH is the lot of millions of the most useful of mankind: their house and cloathing would not ~~cost~~ for

for a rupee; and their highest luxury is a mixture of grain, which they can hardly afford to season with as much salt as you may hold between the finger and thumb. With you the poor are discontented if they can get flesh-meat and tea only once or twice a day: they wring your heart with pity, if they are reduced to the necessity of drinking water for a few days. Millions here have tasted no other beverage from their entering upon life till their exit; and of this circumstance they never complain, because it would be treated as ridiculous. What pity is it that your malcontents will neither listen to the sufferings of others, nor enjoy the advantages belonging to themselves; though by such discontent national benefits are lost, and misery is incurred!

VIRGIL never saw a peasantry half so plentifully supplied as the English; and in fact, there were few worse than his own: I may surely apply to your cultivators what he has said of the Roman slaves:

*O fortunatos nimium sua si bona norunt  
Agricolas!*

WHEN I wrote you from Benares an account of the Sugar Harvest, the season did not afford me an opportunity of describing the manner of raising that crop. The cane is planted in January, by burying small cuttings of about 12 inches each, that are taken from a small portion kept for seed—One cutcha bit requires four hundred such cuttings; and must be

be watered from four to six times before the commencement of the rains. After each watering the soil becomes hard and clayey, and must be rendered friable by the hoe twice during each interval. Bengal, from its peculiar moisture, does not subject the farmer to these costly operations. On further experience it will be found the most favourable country for this kind of produce that is yet known.

IN this neighbourhood the fertility of the soil, great as it certainly is, will not admit of a succession of sugar crops. The land must be relieved for a year or two with other grain, before the sugar can be a second time produced. Sugar lands, I find, yield the highest rent; being let, on an average, at two muns the cutcha biggah, or about two pounds an acre.—The average produce is said to be from fifteen to thirty mauns to the biggah. Four different kinds of the sugar cane are distinguished by our planters, and of different degrees of estimation. The China sugar has hitherto been preferred to that of Bengal; but it chiefly derives its excellence from a more skillful mode of purifying it practised in that country. On this account, an attempt was made by Mr Crawford at Chiplagur, to introduce the Chinese sugar culture, and the whole process of refining by a colony of natives of that country. This patriotic effort terminated like most others that had to compete with the cheap manufactures of Bengal. The expence of labour so much enhanced the price, that the Bengalese underfold it in every market.



In this slight sketch of the Hindoo agriculture you must beware of supposing, that the condition of the miserable wretches is included who inhabit the hilly country and its jungles. They are as different from the inhabitants of the plain, as a North Highland farmer is from one in Kent. They are in the state of uncultivated nature: they neither plow nor sow; what grain they raise is introduced into small holes made with a peg and mallet, in a soil untouched by the plough. The only preparation given it is turning away the jungle, and thus depositing the seed. In the vicinity of Rajamahel there are many tribes of such peasants, who subsist partly by digging roots, and by killing birds, and noisome reptiles.

In these savage districts ninety villages have been let for two hundred rupees; and yet this pittance could only be made up by fruits peculiar to the situation. All that I have said of the indigence and humble fare of the other Ryots is so far outdone by the condition of these beings, that I will not venture to lay before you the account I have received of them: the faith even of a true believer may be put to a trial too severe: and the testimony of a tolerable historian may be insufficient to establish facts so remote from the ordinary occurrences of life.

DESCRIPTION OF A VILLAGE IN BENARES DISTRICT.

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*Benares,* 1798.

THE mode of living, and the climate of India preclude Europeans, in a great measure, from acquiring any intimate or minute knowledge of the manners of the natives. Unless I had made particular enquiry for the express purpose of laying before you the following account of a village, I might have remained in this country for half my life without any knowledge of the very partial detail which I now intend to present to you.

THE inhabitants of the small zemindary of which you lately had a description, live together in one village, which contains about one thousand souls; a population of nearly one person to each Scotch acre; and twelve individuals to each plough. The power

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of working cattle on this property is four hundred ; that of ploughs ninety.

AFTER the Zemindar, the person next in rank and importance is the *Putwari*, the factor or keeper of accounts between the proprietor and tenants: he collects the rents whether in grain or in money, measures the ground, and in the absence of the Zemindar succeeds to any petty jurisdiction which the small society may require. In him you may recognize the Baron Bailie of Scotland: the salary of this officer is paid by the farmer at the rate of one seer and a half each for every hundred paid to the proprietor. Sugar, cotton, and other articles not consumed on the estate, pay a certain portion of their valued price to the landholder, and for each rupee paid to the landholder the Putwari receives half an ana, or the 1-30th part nearly.

THE Byah, or weigher of grain, is the next to the Putwarri; this man divides the grain between the zemindar and the tenant by weight in their respective proportions. The Byah is paid by both parties at the rate of twelve seer for every hundred mauns.

FROM the mean habitations of the farmers, and their scanty and wretched implements of every kind, I had conceived that there were but little division of labour, and few professed tradesmen. Iron smiths and carpenters make two separate professions in the smallest village. A *Sochar* or master tradesman receives

ceives from each plough a maun of grain, consisting of a part of each sort. This is in the nature of a retaining fee, and must be paid annually over and above his allowance when actually employed in your house. As often as you have occasion for his services there, whether in constructing the building or making furniture, he is entitled to a daily allowance of one *puk'a* or great seer of grain. During each of the three harvests he receives one sheaf of wheat, barley, or rice, according to the nature of the crop then reaped. This sheaf is not undefined in quantity, but consists of about three seer.

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 WHETHER it arises from indolence or superstition, I am unable to determine, that the poorest Hindoo families do not wash their own cloaths; it is certain however that each village retains a number of washermen as a distinct profession. The washerman receives from each plough twenty seer of grain annually; and three sheaves during the three harvests, as in the case of the other tradesmen already mentioned. The families of tradesmen, who have no plough, pay the washerman in specie at the rate of two annas yearly. A sum not exceeding four-pence of British money annually, is certainly a small allowance; but you will recollect that the quantity of clothing used by a family of Hindoo peasantry, is not the fortieth part of what is necessary for one of your tenants. The children, till they are ten or twelve, seldom put on any clothing at all; and after that season a small piece of cloth covering the middle

the whole attire of the lords of the creation in this country. Washing to Europeans in this country is performed by a servant hired by each individual at the rate of from eight to ten pounds annually, a very small sum, if you advert to the quantity of work. Here our whole dress is white cotton, and must on account of the heat of the climate be changed twice or thrice every day \*.

THE superstition of the country occasions another profession not common in your villages, that of a Shaver. Part of the beard, the arm-pits, &c. are regularly shaved even among the lowest classes. As one person in this capacity can accommodate a considerable number of individuals, his wages are settled at one ana, or two-pence sterling per annum; a plough giving twenty seer.

THE greater part of cooking utensils, and vessels for holding water, are of earthen ware; several of these are in daily use in each family, and from their frangible nature the consumption of them is considerable. This occasions the trade of a potter to be universal in every village of the country. The potter receives from each plough his three sheaves in the  
three

\* In some parts the washermen are entitled to five seer of grain for washing the child-bed linen at each birth. The washing is not performed within doors, nor by putting the clothes in vessels as in Europe; but at the side of a tank or river, and by striking them against a curved plank of wood.

three successive harvests; he is paid besides for each pot according to its size; only the zemindar has his at half price, and custom also obliges the potter to provide utensils for soldiers, or such travellers as may pass the night in the village. Earthen pots are very common through all Asia; and by what we read concerning the "potters field," they seem to have been in use in Judea, and to have had an allotment of ground for their manufacture. In India the ground is furnished by the proprietor, and for this reason he is supplied at an inferior price.

- THE lowest, and most despised order of tradesmen in India, are the *Chumars*, or leather-cutters. The
- Chumar receives in harvest three sheaves from each plough; but besides this annual fee he is paid for every set of ropes or harness he furnishes for a plough two seer and an half of grain. For each pair of shoes the customary price is ten seer of grain: tradesmen pay two anas, which is deemed in ordinary times a higher price; but they pay no part of his annual fee of three sheaves: when cattle die the hide goes to the Chumar.

• THE bad police of the East imposes the necessity of employing watchmen during night to protect the property of individuals, and to preserve the peace. This business is committed to the *Duslauds* or *Chockidars*, several of which are required even in sequestered villages. The nature of their employment invests these people with some power resembling that

that of a constable. They apprehend delinquents, or report disturbances to the magistrate. Like all other servants of the public in this country, the Chockidars have an annual fee of three sheaves from each plough during the harvest: ten biggahs of ground are allowed to each for his support; and as several are necessary, the police of the country, imperfect as it is, constitutes a heavy burden on the community. In the vicinity of Europeans there is a greater circulation of property, and of consequence greater temptation to the violation of it. Even in our military cantonments an officer can by no means trust the charge of his house to sentinels; he is obliged to hire two or three Chockidars, the only terms upon which he can hope for security. Without this precaution, the thieves have attained to such dexterity in their trade, that they can easily steal the pillow from under his head during night.

THE most numerous class of labourers in a country village is that of the ploughmen. In this village they amount to about an hundred; and the wages of each is five seer of grain daily, and one rupee each *bulwary*, or ploughing season: two stated ploughing seasons occur each year, one at the setting in of the rains in June; the other after the break up in November. The wages of other country labourers is five seer of grain per day; and during harvest the twenty-fifth sheaf.

THE *Abeer* or *Burdiah* (cow-herd) is another necessary profession in every Hindoo farm. The ploughed land is neither fenced nor lying contiguous, but in scattered and detached spots, perfectly exposed to every invader. The cow-herd receives two mauns of grain each month ; and for every ten cows under his charge he receives the milk of one : if buffalos are under his management he is entitled to the milk of every fifth beast. The cause of this difference I have not learned ; but conceive it to be the greater trouble occasioned by keeping these bulky and obstinate animals. The pasture is common to the whole village, and the tradesmen graze cows on paying their proportion of the cow-herd's fee, which is two anas per month for each buffalo, or the milk of the cow every fifth day. Sometimes the pasture fields lie far from the village ; to it however they are driven ; and should it be necessary to cross a river, the cow-herd lays hold of the tail of a buffalo, and transports himself to the further side with great ease. In the community of the pasture grounds, the joint possession of several tenants, and the payment of rent in kind, you will perceive a strong similarity to the practice of certain districts in the Highlands of Scotland.

THE two trades I am next to describe, are so different from every profession to which European manners give rise, that I beg leave to refer you to the authority upon which this narrative is grounded ; for



I here wish to disclaim all responsibility, as well as merit, in giving the information they may afford.

THE trade of a *Barhi* is to prepare dishes of leaves from which the Hindoos eat their food. In Bengal the plantain leaf is so common, and from its size so commodious for this purpose, that the object is attained at once without the intervention of professional skill; but in the upper provinces there is no single leaf which can supply the place of the plantain; an artificial combination is made up by patching different leaves together, which forms a substitute for a plate at the Hindoo meals. Five or six different kinds of leaves are employed for this purpose, according to the produce of each district. In all, however, the manufacture is carried on; and for every hundred plates furnished by the *Barhi*, he receives two anas; the zemindar paying only half that sum, either because he affords a house to the *Barhi*, or because he takes the leaves from his trees. During festivals and religious solemnities, the *Barhi* carries a torch, and performs the office of a *Muffalgee*.

THE other profession alluded to is that of *Bhaut*, or poet, a person who celebrates the family, and the achievements of his patron; and indeed of every one who employs him. He is recognized as a member of the community, and has an annual fee of three sheaves from each plough of the village. Should a man's vanity lay him under no contribution, he has nothing more to pay to this officer. A share of this,

this, however, falls to the lot of many ; and to gratify it they call upon the Bhaut to compose a poem in their praise ; for every such composition, he receives a gratuity proportioned to his merit, or the gratification afforded to his employer. Before marriages, which are here contracted by the parents, it is not uncommon to employ on each side a Bhaut, who celebrates the wealth, influence, and respectability of the party who employs him. And after the marriage, or the birth of their first child, the married persons give him a present of a bullock, or a piece of cloth, according to their circumstances.

THESE particulars are offered on the authority of a native officer of the Bengal army, who at my request made the necessary enquiries upon his own estate. The result he has obligingly communicated in a manuscript in the Hindivi, taken upon the spot. A translation of this manuscript forms the substance of this account ; and as this gentleman bears a very respectable character, I have on my part perfect confidence in the accuracy and truth of every part of his narrative. It ought, in fact, to be regarded as neither absurd nor incredible, that in a country where every great man retains in his service a domestic merely for the purpose of proclaiming his titles to the mob as he passes, there should exist a race of men who subsist by flattery. Our own manners, a few centuries ago, are said to have countenanced a race of bards, who frequented the houses of chieftains, and celebrated their praises in as rude poetry, and by flattery

flattery as gross as the Bhauts of the Hindoos. There are a thousand particulars in which the European customs and manners in the twelfth century seem to have resembled those of Hindostan. The practice of entertaining buffoons and jesters at court, was common to both countries, and seems to announce a state of manners equally indelicate with that above described.

IN this community we have to notice five families of shepherds who possess fifteen hundred sheep; they constitute a particular class who shear their sheep, and manufacture the wool. The finer blankets are sold for one rupee each; the coarse eight anas; but the zemindar is entitled to what he uses at an inferior price. Mutton is ate on certain occasions by almost every cast, at least the rams; and the case is the same with goats flesh. In this part of the country there is a price fixed by Europeans for every sheep; three for a rupee, or about tenpence each. This is lower than the real value, and must operate as a grievance; it explains the reason why the natives are so averse to sell their productions to Europeans.

FROM the shepherd we pass to the village Brahmin. As often as the Ryut has collected a particular harvest, the Brahmin is sent for, who burns ghee, and says prayers over the collected heap; all present join in the ceremony; and the Brahmin receives as his part one measure of grain in that implement which is employed in winnowing it. He is employed  
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by all the farmers, and at each harvest, he collects a contemptible tithing for a village curate; besides this the Brahmin receives many different fees and annuities. At each marriage he claims five per cent. of the bride's whole portion; in cases where the parents can afford no marriage dower, the bridegroom pays the Brahmin his fee, which rises with the circumstances of the party; but even to a poor man it costs five rupees.

OF THE VARIOUS GRAINS CULTIVATED IN UPPER INDIA

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*Futtigurr, Dec. 1797.*

THE different species of grain cultivated in Hindostan are more numerous than in Europe, or perhaps in any other part of the world. The agricultural division of the seasons is into the two Great Harvests Khereef and Rubbee. The former continues during September and October, and the latter during March and April. In the Khereef, the kinds of grain, chiefly cultivated in the upper country, taken in the order of ripening, are as follows\*.

1. Bhootah ;

\* The Linnæan names are given on the authority of Dr Hunter, a Gentleman of great accuracy as well as learning, and a valuable member of the Asiatic society.

1. Bhootah; in the interior provinces, Mukha. This grain is in flower in July, and is reaped in August and September.

2. Congree; *Panicum Italicum*, flowers in the end of July.

3. Oord, or Mash; *Phaseolus max*, flowers in July and August, is reaped about the end of September.

— 4. Moong Phullee; *Arachis Hypogæa*, (ground nut of the West Indies), flowers in September.

5. Murhua; *Cynofurus coracanus*, Linn. This grain has obtained various names among the natives. In Myfore it is denominated Raggy; in the Carnatic Natchenny, and Maud or Mal, in the upper provinces.

6. Bajira; *Holcus spicatus*, Linn. This grain called Drob in the north of Africa, is small and round in figure, reckoned nutritious in a high degree, but heating, and hard of digestion. Its cheapness renders it useful among the poorer class of inhabitants; and by the Mahratta cavalry it is made into flat cakes, which the horseman can carry under his saddle in sufficient quantity to serve him several days. It is also reaped during the Khereef.

7. Jooar;

7. Jooar ; *Holcus Sargbum*, Linn. The culm is very strong, and grows to the height of seven or eight feet. The spike egg-shaped, nodding, or hanging, six or seven inches in length, nine in circumference. Of this there are some varieties.

8. Moong ; *Phaseolus munga*. The specific difference between this and the Oord is difficult to establish : for agricultural purposes it may be sufficient to consider them as mere varieties.

9. Beertia ; a species of *Panicum* used in food, as is the Congree.

THE second harvest, Rubbeef. In this season are grown and reaped most of the European grains ; which are sown at the breaking up of the rains, and gathered in spring.

1. Wheat ; *Triticum sativum*. The species most frequently sown in upper India, has the following marks : Calyces four flowered, ventricose, smooth, imbricated : the two outer florets with long beards ; the third with hardly any ; the fourth and innermost neuter. From this character, says Dr. Hunter, I am doubtful whether it should be referred to the species *Æstivum* or *Spelta*, or whether it may be regarded as a new species. It is in general a pretty close, thick crop ; apparently smaller in both straw and grain than our European wheats : but from its great hardness, and the vigorous sun beams, it yields a better

better flour. It is chiefly in the upper provinces that wheat is cultivated: in the low marshy grounds of Bengal it is not found to succeed.

2. Channah; *Cicer arietinum*.

3. Torr, or Arber; *Cytisus cajan*. It is sown during the rains, in mixture with the Jooar; and when that crop is removed it stands till reaped in the wheat-harvest.

4. Pease; Muthur or Butlee: Of this there are several varieties, which are reaped during the cold season. It is surprising what degrees of continued frost these crops endure in the provinces of Rohilcund and the Deccan, without injuring them. During the months of December, January, and February, seldom a night passes without freezing the pools; yet from the dryness of the season little check is given to the crops.

5. Barley; *Hordeum tetrastichum* of Linnaeus. This is the most abundant crop in all the upper districts of India: it is made into cakes by the natives, which are cheap, and by no means unpalatable. The species is four rowed, and of that kind called big by the English, supposed an inferior kind. It is a cheaper food than wheat, and for that reason perhaps it is more generally used than any other grain except rice in the lower provinces. Barley, in many districts, requires artificial watering; an operation by  
far



far the most laborious in Hindostan. It is performed sometimes by the help of bullocks, but oftener by the hand, assisted by a simple machine.

7. COTTON is the great staple of some of these provinces, and that on which they principally depend for profit by exportation. It is carried on small bullock waggons from the interior, either to Mirzapore and Calcutta, on the Ganges, or the Guzarat on the Persian Gulph. This produce is in some districts partly manufactured into printed and stained cloths. The root of the *Morinda citrifolia*, termed Aal, is the material of this dye, and also forms an article of their exportation:

8. OPIUM is a favourite article of cultivation among the natives, which European capital and skill has tended greatly to increase. In our provinces the practice is varied according to the views of the European managers appointed for its direction. Among the natives in the independent states, the culture is more uniform, and not yet generally understood by us. In the province of Malwa, the most experienced natives have favoured us with the following particulars of their management.

THE poppy seed is sown in December, upon ground well manured with cow dung or ashes: after a previous preparation of seven ploughings, the ground is divided into little square inclosures of two or three cubits; these inclosures are formed by a flight

slight embankment of earth only a few inches in height: within these the seeds are sown to the quantity of one seer and a half, or two seers per biggah, (one third of an acre). After eight or nine days the ground is watered, that is, completely overflowed to the depth of two or three fingers, by breaking down a small outlet in each inclosure successively. This operation is repeated seven times, at the distance of ten or twelve days: after each watering, when the ground is a little dried, but still soft, it is stirred with a small iron instrument, so as to loosen it effectually, and the weeds are carefully removed: the plants also are thinned away if they come up too closely, to the distance of five or six inches. The plants thus removed, if young, are used as pot herbs; but if grown up to a larger size, a foot and a half, they become unfit for this purpose from their intoxicating quality.

THE poppy flowers in February, and the opium is extracted in March or April, sooner or later, according to the time of sowing: the white kind yields a greater quantity than the red; the quality is reckoned the same from both. When the flowers are fallen off, and the capsules assume a whitish colour, it is time to wound them. This is performed by drawing an instrument with three teeth, at the distance of about half a line from each other, along the capsule from top to bottom, so as to penetrate the skin. These wounds are made in the afternoon and evening;

ing; and the opium is gathered next morning. They begin at day-break, and continue till one p'har of the day is passed. The wounds on each capsule is repeated for three successive days. The whole capsules in a field are wounded, and the opium gathered in fifteen days. In a fruitful season, and good ground, they obtain from six to nine seers of opium from a biggah of ground: a small crop is from two to four seers. When the drug is cheap, it sells for fifteen rupees per dhiree; when dear, and of a superior quality, for twenty-five rupees. A dhiree contains five seers and a quarter; so that the gross produce of a good crop is 1675 rupees per acre, equal to 200l. The gross produce after some imperfect experiments in England, amounted only to 50l. per acre; but from such data we are not warranted to draw any conclusion.

IN the Mahratta districts all the opium, even at the time of gathering, is adulterated with oil; and this mixture they do not consider as fraudulent: the practice is allowed, and the reason assigned for it is the prevention of too great dryness in the drug. The people employed in gathering have each a small vessel containing a little oil of sesamum or lintseed. The opium which has flowed from the wounded capsule is scraped off with a little iron instrument, previously dipt in oil: a little oil is taken in the palm of the hand, and the opium gathered with the iron instrument, is wiped on the hand, and kneaded with the oil:—

oil. The whole quantity gathered, is brought home kneaded into a mass, and thrown into a vessel with more oil, into which the whole crop of the season is collected.

It is thus evident that the quantity of oil in any given quantity of opium, is not determined with much accuracy; they compute that the oil amounts to one half of the pure drug, or one third of the mixed mass. The adulterations practised secretly, and considered as fraudulent, are mincing the powder of the seed leaves of the poppy, and even ashes. The mixture of oil renders this opium of very inferior quality to that of the Company's provinces. It is particularly unfit for medicinal purposes, and for making a transparent tincture. It is exported to Guzarat and other parts: the merchants advancing the money to the cultivator, at least in part, while the crop is on the ground.

OF THE HEMP, FLAX, &c. OF INDIA

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*Chandernagore,* 1799.

OF flax and hemp, with all their varieties, and the different substitutes for these useful articles, the Hindoo agriculturists possess greater abundance than any other people. The advantages of which these might be productive to a commercial nation have not been overlooked; yet it is probable that necessity only will prompt us to avail ourselves of them to that degree to which they may easily be carried.

THE most common substitute for hemp in Bengal is the *Jute* or *Paut*, *Crotalaria juncea*, Linn. It grows abundantly in many parts of this province; and is much used for sails, ropes, fishing nets, and other naval purposes. An act of Parliament has been passed permitting this article to be imported free of duty. It has in consequence been imported, though

though in no great quantity. Since, however, rags, and the materials of the paper manufacturers have risen so much in price, it has been recommended as a beneficial article to the owners of rice and country ships, to fill up their cargoes with as tonnage. Such goods as require to be packed in gunny bags have been found most convenient for the importation of this article, without risking much capital. The price of Sun, which, in its manufactured state, this commodity is called, is from seven to eight shillings per cwt. in Bengal, and it has sold in England at thirty-five shillings. The refuse of this plant furnishes to the Hindoos the material for making paper; and it is probably from this circumstance, that Mr Sewell, bookseller in London, first conceived the idea of rendering it subservient to our manufacturers during the great scarcity of materials. Many have already profited considerably by the information conveyed by this judicious and accurate observer; and, it is highly probable that the useful hint which he has conveyed in the European Magazine, will be more beneficial to his country than some other more splendid discoveries.

THE following varieties of this plant have been cultivated in the Botanic Gardens at Calcutta, and experiments decisive of their utility, have been made by Dr. Roxburgh, a gentleman to whom botany is more indebted than to any other man of the present times.

1. Bhungee Paut. *Corchorus olitorius*, Linn.
2. Ghee Naltha Paut. *Corchorus capsularis*, Linn.

OF the cultivation of these plants, and his attempts to improve the quality of their flax, Dr. Roxburgh's letter to the Governor in Council will convey the best idea,

“ IMMEDIATELY on my arrival in Bengal, among other things I turned my attention towards such plants as yielded the natives materials for making twine, &c. and found they possessed not only *Crotolaria juncea*, and *Hibiscus cornabinus*, (an account and drawings of these I have already transmitted to the Hon. Court of Directors), but that they also cultivated for the same purposes two species of *Corchorus*, the *olitorius*, and *capsularis*, with varieties of each species of *Oschynomene* \*, which the late Dr. Koning first described. Drawings and descriptions of these plants, with the method of cultivation, and preparation of their fibres, I have now the honour of transmitting, together with some cleaned samples, which I beg may be sent to the Hon. Court of Directors.”

“ THIS substance (Jute), might probably be rendered much finer, even fit for cambric and lawn, by  
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\* Dooncha of the Bengalese.

being sown thicker than usual, and cutting it at an earlier period; for it is well known that cutting flax green, prevents that harshness which it acquires by standing till full ripe. I have in view some experiments to determine this point, which I think is a very essential one.— Besides, the Hindoos, so far as I can learn, pay no attention to the cleanness, or quality of the water they steep the plants in, which is no doubt a material point; and requires to be attended to. Soft clean water, well exposed to the sun's beams, and never used for the same purpose a second time, is what I would recommend. Jute so prepared, will no doubt be of much more beautiful colour, than when less pure water is used. Putrid foul water will most likely hasten this operation, and it is therefore employed by the Hindoo farmers, who are more intent on dispatch, than on the colour of the substance, as it is only employed by them for coarse purposes, where colour and appearances are totally immaterial.

“ WITH a view to determine whether the quality of the Jute might be rendered finer by the above means, I caused two parcels to be sown about the usual seed time, viz one of Bhungee Paut, and the other Ghee Naltha Paut: The seed of the first proved bad; a circumstance I did not learn, till it was too late to sow a second parcel; consequently I am unable to say any thing farther concerning this species.



“ THE capsularis grew well ; and as it was sown thick, run up slender to a considerable height. It was cut at an early period, steeped in perfectly clean water, bleached, beat, and dressed with the scutch and coarse heckle. In the package which accompanies this, the dressed fibres will be found in one bundle, the dressing in another, and some of the undressed in a third. From these you will be able, I hope, to judge whether this substance is to be improved by the means practised in Europe, to procure fine flax for cambric, and fine lawn.”

BESIDES these substitutes, the true hemp, (Bang of the natives), is found in many places of Bengal. It is however but little used, except for the oil, which is obtained from the seeds, and for medicine ; or, lastly, for an intoxicating ingredient mixed with tobacco for the Hookah. Intoxication by this means, is perhaps the greatest and most universal evil suffered by the Hindoos ; since its small price puts this treacherous luxury within the reach of all.

THE common flax of Europe, (Tissee of the Bengalese), is cultivated in all the upper provinces as well as Bengal. This, however, is for the oil solely ; for the natives are unacquainted with the use of Tissee as a flax. The cultivation of it for the fibre might no doubt be turned to great account, since under the present management this most useful part is entirely thrown away. On the vast and fertile plains of Bengal, proved by the experience of ages to be adapted to the growth  
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of this plant, it is difficult to assign any limits to the quantity of flax that might be raised. Whilst England pays annually to Germany for eight or nine hundred tons of linen yarn, this plant, and these rich territories offer a wide field of interesting experiment to the government of Bengal.

COIR, (the inner bark of the Coco nut), used as the running rigging of ships, is preferred to hemp, by all who have used it. Though hard to handle at first, yet, on a little use, it becomes easy, and has many good qualities. Employed in cables, it is in general use in Asia; and being at once light and elastic, it possesses many advantages. It has been stretched from six to nine inches without breaking; a degree of elasticity which must enable a ship to ride easy; where with a common cable, it would be dangerous or impracticable. None of the Coir cordage receives tar; an advantage in point of saving, if it continues fresh and durable, as it is said to do, when carefully wetted with salt water.

OUR Oriental possessions have already contributed largely to the resources of the empire in the necessary article of ship-timber; several of the most valuable ships that ever entered the Thames having been built there: It is probable that the period is not far distant when they shall prove equally serviceable in the articles of paper, sails, and cordage. In obtaining from Hindostan all the benefits which are compatible with its own interest to bestow, we have, it must be allowed

allowed many difficulties to encounter : The chief of these, perhaps, is want of enterprise in the natives themselves ; they possess, (what philosophers supposed only to belong to inanimate matter) a powerful *vis inertiae* which must continually be counteracted by the application of an adequate stimulus on one part. To invigorate and properly apply the industry of so many millions of people is a great and important trust which has devolved upon the British. It is comfortable to observe that this is a trust, our countrymen who adventure in these provinces are, in general, well qualified to fulfill. Their ardour in pursuit of fortune is often a happy corrective of the indolence of the Asiatics. There are in Calcutta some mercantile houses whose enterprise and capital put in motion a greater number of hands than any equal number of individuals in any quarter of the world. The number of sailors, ship-builders, growers of indigo and cotton, and manufacturers of every description, who are supplied with labour and subsistence by the single house of Mr Fairlie, is perhaps not equalled by any individual in Europe. Yet this Gentleman, after twenty years laborious exertion in a debilitating climate, continues to prosecute every new adventure with the same activity as he commenced his career : “ *Nil actum reputans donec aliquid superesset agendum.*”

• OF THE COCHINEAL.

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*Benares,* 1798.

THE indigo manufacture which has given a considerable spur to the industry of the natives of India, was soon succeeded by an attempt highly commendable, to establish that of cochineal. Dr. Nicolas Fontana, a gentleman of great literary knowledge, has detailed the advantages to be derived from this culture, in a very satisfactory manner.

“ THE introduction of cochineal into Bengal, which our neighbours had endeavoured to naturalize in their West India possessions, deserves particularly to be marked as being likely, under proper management, to become not only a new æra in the progressive resources of the Company, but an accession of opulence to the British empire: an æra the more remarkable, as, notwithstanding the attempts of Government,

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vernment, the design was not accomplished but through accident, the great parent of discovery, which, with never ceasing influence, operated in so many ways for the good of mankind.

“ AFTER a large plantation of the various species of *Opuntia* had been reared at Madras, waiting only the arrival of the insect to make it serviceable, which a long correspondence of thirteen years could not obtain, Dr Anderson’s solicitations about it had almost been forgotten; yet though his laborious industry and zeal for his country’s interest, had no other reward, the introduction of the cochineal insect into India is entirely owing to his publications on the subject, which fortunately fell into the hands of Captain Nelson, who was then stationed at Madras with the 52d regiment. On the Captain’s return to India in 1795, the fleet in which he sailed repaired for refreshment to the port of Rio de Janeiro. In his perambulations a little way out of this town, he was attended as usually by the centinel, when he saw a plantation of *Opuntia* with the insect upon it. This circumstance immediately brought to his recollection the ardent wish for the importation of the insect expressed in the letters he had read at Madras; and he conceived the hope of being able to gratify Dr Anderson’s desire, by carrying some to India with him.

“ A day or two previous to his embarkation he took another walk to the place where he had seen the  
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the *Opuntia* or *Nopal*. He made bold to ask the cultivators for some of the plant, being curious, he said, in matters of natural history. Having collected several other plants he wished to have this also. The good people being the less suspicious, as he was in his regimentals, granted his request. They gave him several plants with insects upon them, which he carefully carried aboard. Many of these, during the passage to Bengal, which was remarkably long and tedious for such delicate passengers, died. A few insects only remained alive on the last plant, several of the leaves having withered.

“ Capt. Nelson on his arrival in Calcutta, sent the survivors to the Botanic Garden, where they were distributed on the different species of the *Opuntia*. This well nigh frustrated the whole labour. On the China and Manilla species, they were found to die fast. It fortunately occurred to make the trial on the indigenous *Opuntia* of Bengal, which is also abundant in many parts of India. On this the insects thrived amazingly; in so much that from these few, in the course of four or five months a quantity had been collected sufficient for distribution among all who wished to try the rearing of them; and several plants upon which the insects were feeding, were sent to Madras.

“ THE novelty and importance of the object promising so speedy and plentiful a harvest of fortune, engaged a multitude of individuals to undertake the business;

business; and this, no doubt, the more readily, as the cultivation of this rich field of wealth required but very little capital. Many golden dreams were enjoyed by the new planters. All who had a mind were provided with insects; and undertook plantations of *Opuntia*.

“ THE anxiety and impatience natural to all, who indulging in ardent expectations, undertake new enterprises, induced some of the planters of the Nopal to put the insect upon it, when the plant had just emerged from the ground. Others, through inattention, kept their insects in places too near to where the *Opuntia* was growing young, which in that tender and premature state was devoured by these creatures, when hard pressed by hunger. The unskilful mode of drying was likewise adopted: and some of those persons whose opinions lead the multitude, declared in the most decided and positive manner, that the cochineal would never answer, as it would not be found worth the trouble and expense attending the cultivation of it. All these considerations damped in a great measure the ardor of the enterprise. Many abandoned the pursuit, and left the insects to provide for themselves, after the plants destined for their use were destroyed, wherever they could find nourishment. They were seen flying about indiscriminately on various other plants, and thus perishing; while others rooted out the plantations, and employed the ground for other purposes.

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BESIDES the discouraging circumstances already mentioned, it was urged that the species imported into India, was only the *Grana Silvestris*, and that the first specimens sent home had been of no value. They had grown lumpy and musty for want of being properly dried, or thoroughly divested of the cottony substance with which the insect is covered. But supposing, it was added, that a proper mode of drying and preparing it could be found out, and the cultivation of it brought to the greatest perfection, it would soon overstock the market, as there is a certain quantity only, and that not very great, which is required for Europe. This would soon be supplied, and loss instead of gain would accrue to the planters. This excess, however, it was farther urged, was to be presumed only in the case of the country being able to supply plants sufficient for the food of the insect, which was very doubtful on account of its quick reproduction, as it sends forth a new generation every forty days.

“THESE with other objections of less force, may easily be refuted by any impartial observer acquainted with the nature of the climate and soil of India, even without any kind of knowledge of agriculture. In such a vast extent of territory as that of the East India Company, and lying under such a variety of climates, it is not surely impossible, or very difficult to find a climate and soil fitted for the naturalization and rearing the cochineal insect; and where the plants will grow to proper size for affording it food;  
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in the same manner as in the districts of Mexico, where the people who take most pains, have them growing to such a height as requires ladders to gather the insect. Such a state of the plant would check the too rapid reproduction of the insect, and at the same time improve its quality; for it is a fact that the Sylvester Cochineal, when bred upon a full grown Nopal, loses part of its tenacity, and grows to double the size of that gathered on gunny plants, and less covered with the cottony substance.

THE cultivation of cochineal, would in all probability be greatly favoured by the vicinity of a hilly country; such as the Boglipore, Rajahmahl, and Purneah. It can be ascertained by good authority, that there are already in the Chittagong district, plantations of large Opuntias, which have been growing for two years past. Whenever the insect shall be placed on these plants, we shall see cochineal of a very good quality. The nature and habits of the natives, seem entirely calculated for the employment of gathering the insect; work that may be done by old men, women, or boys.

“As to the drying the insects, there is no country where the sun has such influence as in Bengal. The method of drying in the sun, after scalding the insect in hot water, is that practised in Mexico, and in Brazil; the insects collected in wooden bowls are thereby spread from them on a hot dish of earthen ware, and placed alive on a charcoal fire; where they are slowly roasted,

ed, still the downy covering disappear, and the aqueous juices of the animal are wholly evaporated. During this operation, the insects are constantly steered about with a tin ladle, and sometimes water is sprinkled upon them, to prevent absolute torrifaction; which would destroy the colour; but a little practice will teach them to remove them from the fire, though surely its barbarity ought to prevent its adoption.

“ By an estimate made on a large scale, of the necessary expence that would attend the cultivation of one hundred biggahs of *Opuntia*, it appeared that after making every possible allowance for ground rent, Ryut gathering, and an European overseer, and interest on disbursement at twelve per cent. the quantity produced of *grana sylvestris* during nine months of the year, reckoning it at four sicca rupees per seer of thirty-two ounces, would more than treble the capital employed. But if this calculation be just in the vicinity of Calcutta, and there is no reason to suppose it otherwise, where labour and ground rent is dear; how much less would the whole expence of cultivation and preparation be, if transferred to a greater distance, and to the other provinces!

“ WHEN the insect has been well dried, it should be packed immediately, as it might otherwise be affected by the damp air of Bengal. In this business the method used in Mexico should be followed; which is to put it first into a linen bag, covered with

a compact net; and then over the whole an ~~skin's~~ hyde sewed so closely as to render it impervious to water.

“ FOR some of the cochineal which I wanted for the purpose of making experiments, collected at Entally, two miles from Calcutta, I paid in 1796, sixteen rupees per seer : for the same quantity raised by another planter, the following year, eight rupees ; and in 1797, I might have bought a great quantity, part of which came one hundred miles from Calcutta, at five rupees per seer.

“ THE improveability of the *grana sylvestria* by attention, will be ascertained more clearly by the following fact, than by a thousand arguments. Some merchants, at my recommendation, bought about two hundred pounds of cochineal made at Rassa-puglah, five miles from Calcutta, at five rupees per seer. The same house paid for seven mauns, or 280 seers, to Mr Stephens at Keerpay, seven rupees ~~per~~ seer, in 1797, and I can say that it was the best of the sort that had yet been seen in town, both for size, cleaning, and drying.

“ LET us now suppose for a moment, such cochineal as that made at Keerpay, to be the best that can ever be obtained in Bengal, and that the above may be within a rupee, more or less, the average price. The *grana fina*, that is brought to Bengal by way of Manilla, sells, when abundant, at sixteen

teen rupees per seer, but oftener at nineteen and twenty. The Bengal Sylvestris contains only from 9-16 to 10-16 parts of the colouring matter contained in the other; but say only one half, so that the manufacturer will be obliged to use two seers instead of one, the quality of the colour to be the same, even at this rate, the silk manufactories at Bengal might be supplied with it, with a yearly saving. After supplying this market, if the quantity be increased, there will be a demand for it in the China, and English markets, though only of the Sylvester kind. Supposing it for ever to remain such, by leaving it to the indolent natives only, even this would be a great acquisition, considering the various ways in which it can be employed by the dyers. Besides if the prices were immediately to fall, so as not to indemnify the present freight and insurance to the private adventurer, how easy would it be to reduce the insect to a much smaller bulk by making a lake, and producing carmine no less valuable than the grana fina.

16 THE overstocking of the market, however, with a drug so important, and of such extensive use, is not a thing very likely soon to happen. The manufacturer wherever he should find it at a price would use it generally, and substitute it in the room of other materials for reds; such as madder, redwood, and others used for woollens, and silks; besides the great varieties of shades from scarlet and crimson, down to all those various tints, to be obtained by

modifications of reagents from cochineal, with a facility and stability that would soon repay the small additional expence that might be incurred by this substitution.

“ It is a thing greatly to be wished by every citizen and patriot, that the Bengal cochineal may soon be brought to such a degree of perfection, and produced in such plenty, as may admit of a reduction of its price sufficient to induce the calicoe printers in Europe to use it more commonly than hitherto, in the dying of cotton; which open a much wider field for its consumption. As to the shyness of cotton to the admission of this animal colour, it is not an obstacle that ought by any means to be considered as insurmountable, in the present state of chemistry, advancing so rapidly to farther improvements, and particularly applying, with vast success, many of its operations to the art of dying. The few unsuccessful attempts made by manufacturers, and chemists, to fix this colour on cotton, have been defeated more by the dearth of the drug, than by any impracticability of the design. This exhausted at once the purse and the patience, both of the artist and chemist; and precluded that continuation, repetition, and diversification of experiment which is necessary to the completion of new inventions.

“ It was upon cotton that the Spaniards first saw

saw the cochineal used in Mexico; but for want of preparation, it produced but a dull crimson. When some of the dried Bengal insect was shewed to the Vakeel of the Rajah of Napal, residing as minister to our Government at Calcutta, he soon knew it, and declared, that it was always used in dying his country robes and turbans. The opportunity arising from the management of a chintz manufactory, induced me to make some trials of cochineal in cotton cloth and thread. By these it was ascertained, that the quantity of colouring matter, contained in the Bengal cochineal of 1796, compared with the grana fina, was from nine or eleven, to sixteen. I then repeated as far as the chemical reagents, to be obtained in India, would permit, various experiments of the kind mentioned by Dr. Barcroft, in his first volume of the philosophy of fast colours, and nearly with the same success in variety of shades and degrees of permanency. From these experiments there resulted two considerable benefits to that manufactory: The first was, that I was induced to make an addition of a certain quantity of powdered cochineal to the morinda root, for the fine cloths and muslins that were to undergo the boiling process in the vat: The second, I was led to mix with the basis for printing red, (alum), a decoction of cochineal, instead of the Turmeric, or red wood, formerly used by printers in tracing their designs. This last substitute was only boiled in  
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simple morinda, and the other with the addition of cochineal. By this process deep and brilliant reds were obtained, such as had not hitherto been seen in Bengal.

THE cultivation, therefore, of the cochineal insect, is an object worthy of all the countenance and care of Government. The attempts towards its naturalization ought not by any means to be abandoned, but continued with all persevering industry, and unwearied attention, to every circumstance that may promote so important a branch of commerce. For this article we send annually immense sums to the Spaniards. Not only might this expence be saved to Britain; but, in due time, the rest of the world might be supplied from the Bengal produce of this valuable commodity. It is in the recollection of most people conversant with India affairs, how the first specimens of indigo sent home from Bengal were depreciated and rejected: Hence the cultivation of it was obstructed for some years. But when it began to be attended to in 1780, and 1782, by people who were acquainted with the best modes of manufacturing it, it was improved with such rapidity, that in 1790 some of the Bengal indigo was judged to be equal to the Guatimala, and bore the same price. The quantity sent home in the year 1795, and 1796, was far beyond what had ever been imported into the port of London from all the world, and more than is required for  
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the annual consumption of Europe. The use of indigo in the dye-house is very circumscribed, and confined chiefly to the colours of blue and green. It gives also a few finer blacks, with lilac grounds; but it cannot, like cochineal, be applied to the various principal colours, as crimson, scarlet, purple, and to all the intermediate shades.

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*Mirzapore,* 1798.

A CONSIDERABLE portion of the rural labour of Hindostan, is abstracted from agriculture, its proper object, and employed in the diamond mines. Of the four principal mines, that at Roalconda, five days journey from Golconda, is the most antient ; for Tavernier says that it was discovered two hundred years before his time. Around the place where the diamonds are found in this mine, the ground is sandy, and full of rocks, in which there are veins of half a finger, to a whole finger in width. The miners make use of irons with hooks at the end, with which they pick out the earth or sand, from these veins, which they put into tubs, and among that earth they find the diamonds.

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THERE are several diamond cutters at this mine, but none of them have above one mill, which is of steel. Tavernier, who is a judge of this subject, asserts that the natives cannot give that lively polish to the stones which the Europeans do, yet they can cut some which our lapidaries will not undertake.

THERE are two kinds of merchants employed in this traffic; the one takes a portion of the ground, and employs miners to dig, paying a duty to the King of four pagodas per day, for every hundred men employed in the works; the other class of merchants are merely purchasers of the stones from the first, and they also pay a duty to the king of two per cent. for all that they buy.

OF this latter class was M. Tavernier, who has given by far the most detailed and authentic account of this trade that has yet reached Europe. He had made many different journeys to the different mines of India, and in this traffic accumulated an immense fortune.

“IT is very pleasing, he observes, to see the young children of the merchants, and other people of the country, who seat themselves under a tree in a square of the town, and though not older than fifteen or sixteen years, and many still younger, they make bargains with perfect skill and exactness. Each has his diamond weights, and a bag hanging by one side, with a purse at the other; thus he sits expecting his customers,

customers, who come to sell. When any person brings a stone, it is put into the hands of the eldest of these boys, who sits as a kind of chief, and after having examined it, passes it to the rest one after another, till all have seen it, when it is again returned to him. Meanwhile not a word is spoken; till he demand the price, with a view to purchase it, if possible; and should he buy it too dear, it is on his own account. In the evening the children compute what they have laid out; then examine their stones, and class them according to their water, their weight and cleanness: they then carry them to the great merchants, who have generally large parcels to match. The profit is then divided among the children equally; only the chief among them has one fourth per cent. more than the rest."

THE bargains made by the great merchants, both Mahommedans and Hindoos, are transacted with peculiar secrecy and dexterity. The buyer and seller sit opposite to each other, and without speaking a word, the one of the two opens his girdle, the seller takes hold of the purchaser's hand, and with it he covers it as well as his own, and according to different signs made by the touch, perfectly understood by the parties, the bargain is concluded. Thus in the same place, a parcel may be sold several times, without any one present knowing that it hath been sold at all, or for how much.

As the value of these mines depends much upon the security and protection given to the purchasers who resort to them; the native governments have afforded this with much solicitude. A particular person is appointed to weigh all the diamonds, to preclude all imposition in this particular; servants are appointed to every considerable merchant during his stay, to guard both his money and effects, and not unfrequently an escort is allowed him till he reach the frontiers of the kingdom.

THE lot of the poor natives, who work the mines, though well skilled in their business, is invariably a hard one. Their wages never exceed three pagodas in the year; a subsistence so scanty almost compels them to dishonesty. Accordingly they make little scruple, as often as with safety they can, to hide a stone for their own profit. As they are perfectly naked, except the small rag around their middle, this can hardly be done but by swallowing the stones; and this being detected they have been known to secrete them in the corner of the eye. To prevent thefts, twelve or fifteen out of fifty are bound to be security for the honesty of the rest, to the great merchant who employs them.

ABOUT seven days journey east from Golconda, lies the mine of Colour, or Ganj, as it is called by the Hindoos. This mine was discovered about an hundred years later than that of Roalconda, by a peasant while he was preparing ground to sow millet,

who found at the foot of a high mountain a glittering stone, as he thought, but on presenting it at Golconda to a diamond merchant, he was informed of its quality and value.

THE report of this trader in diamonds, who had not before seen one of so great weight, made much noise in the country, and engaged the monied men in the vicinity to search the ground, where they found, and still find many of greater size than at any other mine. Here are produced a number of stones from ten to forty carats, and among them some larger, particularly that presented to Aurengzebe, weighing nine hundred carats. In this mine the earth is dug to a considerable depth, carried to a spot prepared for the purpose, and there washed, and winnowed. The men, women, and children employed in these labours, when the place was first visited by Tavernier, amounted to upwards of sixty thousand; and many superstitious ceremonies were employed to engage their diligence and fidelity to their superiors.

THE third mine is that of Sumbulpour, lying thirty coss south of Rhotas, on the confines of Bengal. The name is the same with that of a large town on the river Gouel, in the sands of which the diamonds are found. After the great rains are over, they wait for two months till the water becomes clear, and the river has subsided so low as in some places to leave the sand dry, in other places covering it only a few inches. This happens about the end  
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of January, when workers flock to it from Sumbul-pour, and the neighbouring towns, to the amount of eight thousand persons, men, women, and children.

THEY search the river from the town of Sumbul-pour, up to its very sources in the mountains, through a tract of an hundred miles. Those who are skilled in this business know from the appearance of the sand whether it contains any diamonds; when there is reason to believe that there are any, they enclose the place with stakes and faggots, and draw out the sand for two feet deep. This sand they work, sift, and winnow, as at the other mines. "From this river, says Tavernier, come all those fair Points called Natural Points, but a large stone is seldom found here."

THE fourth diamond mine was in the Carnatic; but was ordered to be shut up by Mirgi Mola, the famous General of Aurengzebe, on account, as it is said, of the yellowness of the diamonds, and the foulness of the stones.

THE hardness, lustre, and beauty of the diamond, have conferred on it a very high value as an ornament among all nations; but no where has it been prized more than in the Mogul territories. Rich presents of these stones to the Sovereign, have always paved the way to rank and preferment. Hence the value of jewels and precious stones accumulated by the Emperors has been immense. In the time  
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of Tavernier, one stone in the possession of the Great Mogul, weighed 279 9-16 carats, and was valued by him at 11,723,278 livres, or nearly half a million sterling. During the reign of Acber, which was before the period when the empire reached its summit, either of wealth or splendour, the vast treasures of the monarch were preserved in twelve distinct offices, three of which were occupied by the jewels and plate only. To each treasury a Tepukchy and Darogha were appointed, who classed the jewels in a regular manner, according to their kind and value, and they were always ready to render an exact account daily or monthly of their application or expenditure. Concerning the different regulations of the mint and jewel office, the author of the Ayeen Acbery is more full and luminous, than upon any other department of the internal economy of that great empire.

THE Moguls were no less curious in other gems than in the diamond: Emeralds, topazes, sapphires, and pearls, always occupied a considerable part of the jewel office; and their value was greater than that of the diamond. Considering the small progress that chemistry had then made in any part of the world, their knowledge of gems and of the precious metals may be regarded as both accurate and extensive. The methods laid down for refining gold and silver, by Abul Fazel, rather resemble the accuracy of a professional man, than the ideas of a nobleman treating generally of the state of the treasury. No less  
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than twelve different degrees of fineness of gold, called barrah banny, are distinctly noted in his book ; and the method of ascertaining each degree in any given specimen, is accurately laid down.

- THE practical habit of ascertaining the goodness of coins, or the fineness of jewels, is an attainment in which Europeans are at present far outdone by the natives. Their skill in this matter is so decidedly superior, that every European whose transactions are considerable, retains a native writer, or Bannian, who receives payments for him, and who is answerable for the sufficiency of the money of which he accepts. In most of the great towns of Hindostan, gems and precious stones are procurable as a mercantile commodity ; but an European without professional knowledge, and much experience in this traffic, could not safely enter into competition with the native merchants.

ANOTHER cause of the abstraction of useful hands from agriculture, is the pearl fishery. The natives employed in this trade are very numerous, while the drudgery they suffer is far more unhealthy and perilous than that of the diamond mines.

THE shell-fish which produces this jewel, is the *Mytilus margaritiferus*, which is found adhering to the coral banks along the shores of Tinivelly. It is fished by the natives, who assemble in small boats from different quarters, at two seasons of the year ;  
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the first continues during March and April ; the second during August and September. After each fishing a numerous fair is held for the sale of the produce. Seven different villages skirting the sea, of which Tutocorin is the chief, have long been famous for a numerous population subsisting by this traffic ; but if we may judge from their toils and their dangers, their condition cannot be envied.

THE divers sink themselves to the bottom generally at the depth of twelve fathoms, by means of a stone fastened to their feet, and from habit can remain under water till they fill their bag with shells ; this effected, by a twitch of the rope they make a signal for being drawn up. The space of eight or ten minutes has scarcely elapsed when these miserable divers again plunge into the sea, to repeat the same task, which continues during the whole fishing season. This is the *Κολύμβησις τῆ πινικῆς* of Arrian, which from his time to the present day has constituted the drudgery of an unhappy race, who are thus exposed not merely to the danger of cold and suffocation, but to the voracity of the shark, who devours many of their numbers, in spite of the *Abrajanins*, or magicians, whom they superstitiously employ to charm them.

THE fish when collected, are left in vast heaps to putrify upon the shore ; and thus fever, dysentery, and a new series of calamity is generated among the adventurers ; who, after all this risk and toil, pocket but

but small gains from a traffic, the success of which is very precarious. The pearls in general found are small, called seed pearls, and sold by the ounce; the larger pearls which sometimes constitute a prize in this hazardous lottery, are of immense value, and have continued in high estimation since the earliest times. A single one presented by Julius Cæsar to Servilia, the mother of Brutus, has been estimated at above forty-eight thousand pounds; others of still higher value are figured by Tavernier, particularly that great pearl which hung from the neck of the artificial peacock, which surmounted the diamond throne of Aurengzebe.

## DESCRIPTION

DESCRIPTION OF THE FORT, AND OF THE ADJACENT  
COUNTRY.

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*Allahabad, July 9, 1798.*

THE cultivation of the land goes forward here with a greater degree of success, than, from previous information respecting the province, I had reason to expect. During a short ride in the morning, you may observe in this season nearly an hundred ploughs at work : these are however, if possible, of a more awkward, and inefficient structure than those I have already described : the whole plough and harness is daily carried to the field by the ploughman, who is sometimes a slender boy.

THE setting in of the rain, is every where the commencement of the ploughing season ; during the dry weather, the soil becomes too hard to be penetrable by an implement so paultry as an Hindostanee plough.

plough. The sugar plantations, of which there are a few here, are an exception to this. These are watered, and consequently can be dressed earlier. At present they are in great forwardness, overtopping, by the height of a yard, the small fences by which they are inclosed. Wheat, bajerrow, and Indian corn, are other crops of this season pretty well advanced, having already received one weeding.

SOME manure is here laid upon the ground, not cows dung; that is too precious; but any kind of filth or rubbish which can be collected in a farm-yard. This is carried out in baskets, borne not on the back, as is done by our Highland dandels, but on the head. Among such barbarous usages, it is not worth while to make comparisons; yet in the quantity carried, the Highlanders have a decided superiority, over a race where feebleness and want of energy, as well as strength, is conspicuous in every thing.

A person is hurt to record such proceedings; they derive importance however from the consideration, that such servile drudgery constitutes the lot of, perhaps, the far greater part of the human race. Could you imagine it, even in these humble toils, and in this obscure destiny, the peasant is insecure. When he goes abroad to the market, or to resume his labour in the field, he arms himself according to his circumstances, with a tulwar, a spear, or a bludgeon and trusts more for protection against violence

to the strength of his individual arm, than the general police of the country.

AMONG the early Romans, we are told, that every stranger was an enemy, and that by one word they expressed both. Here a man's enemy is perhaps his nearest neighbour: when, therefore, he leaves his house, he prepares himself for what frequently happens, an encounter with thieves and robbers\*.

THE inhabitants of Oude, in their political association, if a state of anarchy can merit such a name, are in that condition which was decreed as a curse upon the descendants of Esau; "their hand is against every man, and every man's hand is against them." They have actually before their eyes, what the celebrated demagogue only had in beatific vision; a view of society reduced to its "first principles." Each individual here travels either with the prospect of defending himself against robbers, or of assuming himself that perilous vocation. Hence every man who has been absent for any considerable time, has a sacrifice offered to the gods for his safety, if haply he return safe to his family †.

THUS

\* "Why are ye come out against me with swords and staves, as against a thief and a robber?" is a question you may here put to almost every man you meet; for by every one you are held in suspicion.

† Vide *Seir Mutagherin*, by Golim Hossain Khan.

Thus within the short period of a man's life, fell suddenly to pieces the great empire of Hindostan, almost without external violence; like an animal body in the latest stage of putrification, from the extent and maturity of corruption that pervaded the whole of its members. Every province, almost every district, displayed a faithless servant of the empire, or some adventurous chief usurping absolute power; and practising all the extravagancies of an unprincipled mind on its sudden elevation to the plenitude of despotism. While you, therefore, inveigh in such impressive terms against European rapacity in the East, we, who are on the spot, content ourselves with the humble persuasion, that for a country in such a state to be possessed by a British army is a kind dispensation of the Ruler of nations.

It is felt and acknowledged as such by the natives themselves. The protection it affords gives them an opportunity of laying aside their swords and spears; or, if you please, of literally "turning them into ploughshares." With regard to myself, that conviction has not arisen from books, but from ocular demonstration.

The working cattle are a small species of oxen, of a hardy breed, as the usage they endure abundantly testifies. That superstitious veneration paid to the cow, does not always ensure humane treatment to this animal; so loose is the connection between religious belief and moral conduct. Black cattle during

ing the dry season are so poorly fed, that they barely survive. A dozen of milk cows will hardly equal the produce of a single one of your's, either in the article of cheese or butter.

THE buffalo seems here an useless animal ; it enters not the draught, and not often carries burdens ; a coarse kind of rancid ghee is the only vivre it seems to afford. The goat, however, seems to attain the full perfection of the species. While the grass is burnt up by the excessive heat, it nibbles successfully among the roots for a subsistence. At present while the moisture produces abundant vegetation, it wallows in so great plenty that the dug is distended so as to drag upon the ground.

IN Allahabad, the breed of sheep is small even for India ; and the fleece consists of a coarse black hair, altogether unsuitable for cloth. Of this harsh stuff, however, such as it is, small rugs are made for the shepherds to shelter them from the rains, and to wrap their body during the night. Under these you see them shivering in the fields ; followed by a few sheep, or tending hogs. This last is the most humiliating condition to which either a Hindoo or a Mussulman can be reduced. And as the Jews had similar prejudices, the prodigal must have been in great distress before he submitted to his patron, who "sent him into the field to feed swine."

THE wages of these "hired servants," are so extremely small, that there is little difficulty in believing that they are sometimes reduced to the necessity of participating in husks with the animals they tend. It is certain that even in the times of plenty, our grooms have been found eating the horses' meat, although their wages are regularly paid, and amount to double the price of country labour.

IN this district, the whole stock of a farmer is not perhaps worth eight rupees; when the price of his cattle is included, it still amounts only to a poultry sum. He is unsafe in laying out money on his farm, and he does not attempt it. The best informed native I have had the opportunity of consulting, assures me that the Ryot has no security whatever in the possession, no more than his superiors the Aumil and Zemindar.

THE rents are levied by an irregular banditti, under the denomination of an army, who drive away the whole of a village, burn the houses to the ground, and carry off the women and children. An action of this kind happened in the morning on the same ground which our army occupied in the evening, during our march to this place from Lucknow.

IF the stock of the farmer be insecure, money lent is almost equally so. A man who possesses any thing beyond a mere subsistence, is induced to expend it on personal ornaments; rings for his wife's nose and



and ears; or bangles for her ankles. Thus the whole property of a family is generally borne on the back of its members. Whatever is not disposed of in this way is hid in the ground. There are traditions of money being concealed under this fort, and almost all the great buildings in India. Though I am apt to believe that such reports are often current without any foundation in truth, it is certain the Begum of Azof Dowlah paid the demands of the Company made upon her husband, by treasure thus deposited.

SHE sent an eunuch with certain directions into a rugged field with a string, which he fixed upon a peg he found there; from this he stepped backwards, keeping the peg in the same line with his eye, and a third object mentioned in his direction. When he had extended his line to a certain mark, he there stooped, and ordered the ground to be opened, when twenty-three lacks of rupees were taken up.

A few personal ornaments are therefore the whole wealth, even of the better sort of Ryuts; and this wealth flows in the same channel with his affections. A favourite child, is frequently decorated with talismans of silver hung round his neck, or tied to his arms. These, according to the popular creed, are of power to repel all the machinations of demons, and to ward off all that host of ills which "flesh is heir to." The Mussulmans indulge the same superstition, and are equally confident that they derive  
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the same advantages by inclosing in the trinkets a few holy texts from the Coran.

THE fort of Allahabad, from its situation at the confluence of the two sacred streams, the Jumna and the Ganges, has a high reputation. It is resorted to, as well as Benares and Gyah, by great numbers of devout pilgrims from all parts of India. There is at present an encampment of four thousand Mahrattas from the distant province of Guzarat. They are the retinue of a pious widow, who has travelled thus far with the bones of her husband, with a view to immerse them at the point of junction of the two holy streams.

EACH individual pilgrim avails himself of this opportunity of washing away, not merely his sins, but all filthiness of the flesh, by this useful ablution. The ceremony of purification is performed by shaving every part of the body by the hands of a Brahmin, and afterwards bathing. A small offering for this inestimable privilege is presented to the officiating priests of the place. Next to their interest, that of the prince is consulted in these ceremonies. A small tax must be paid to the Nabob of Oude for their admission to the spot. This tax amounts annually to a considerable sum, with the collection of which the British have avoided all interference since their acquisition of the fort. It is farmed out at a certain sum to a native, who annually remits the amount to the Lucknow treasury.

THOSE

THOSE officers, whose apartments are near the point of junction, are not a little annoyed by the midnight orisons of these devotees. Their howlings under the windows, rather resemble the noise of a madhouse, or the wailings of despair, than the aspirations of sober piety.

WHAT is still more embarrassing, part of these ceremonies must be performed in a vast subterraneous cave, in the middle of the fort, which is supported by pillars, and extends far and wide in every direction. This noisome dungeon, which affords to unbelievers an image of the gate of Tartarus, rather than the porch of Paradise, leaves the caves of the sybils far behind it in every thing tremendous and disgusting; and is said to be infested by snakes and noisome reptiles, and to penetrate under ground as far as Delhi. The popular legends of every country are thus marvellous and absurd.

It is certain, however, that the heat, and suffocating vapours, which continually exhale from it, is likely to prove fatal to the worshippers; they are seen fanning each other after returning from visiting it, with all the symptoms of having inhaled a noxious atmosphere. In a few minutes my curiosity was literally *stifled*; I returned satisfied with enjoying a Pisgah view of these disagreeable mansions of stench and devotion.

THE pilgrims, to be admitted into this cave, must enter the gate of the fort ; and as piety has frequently been employed as a cloak for cunning, the guard must be vigilant, and of greater strength than might otherwise be required. Our recent possession of a place, where the superior ranks may be jealous of our incroachments, or envious of our power, demands peculiar circumspection. The Greeks, we are told, entered Troy under pretence of devotion ; and as the Mussulmans are not more celebrated for honest dealing than the Greeks, our Commanding Officer must be commended for respecting a caution which they despised :—“ *Timeq Danaos et dona ferentes.*”

RELIGIOUS fear is alone capable of extorting cash from a Hindoo ; for of all the trials of his faith and patience, that is the most severe which touches the purse, and the only difficulty the Brahmin has to encounter is to thrust his fingers there. An obstinate struggle between avarice and piety was lately exhibited by a large party of Mahrattas, about 12,000, who arrived here a few months ago. The Brahmins were offered four or five thousand rupces in the name of the whole caravan ; while a larger sum was demanded on their part, accompanied with a threat of excluding the pilgrims from the holy precincts, if it was not immediately paid down. This had little effect, till a Brahmin, who knew his *monde*, offered to cut off one of his thumbs from his hand. Had this been the consequence of their obstinacy,

they must not only have lost their cast, but according to their own creed, the blood of this holy man must have been expiated by their whole posterity. Such sins of fathers are visited upon their children, not for two or three generations, but *ad infinitum*.

IN comparison with such a destiny as this, the sum demanded was but a trifle; to the good pilgrims it appeared so; and they instantly paid it down.

SOME of these victims of superstition annually drown themselves at the junction of the streams; and this being the most acceptable of all offerings, it is performed with much solemnity. The person who thus undertakes a journey to the mansion of bliss, must present a larger sum to the priests, than the common herd of pilgrims. The rapidity with which the victim sinks, is regarded as a token of his favourable acceptance by the god of the river. To secure the good inclination of the deity, they carry out the devoted person to the middle of the stream, after having fastened pots of earth to his feet.

THE surrounding multitude on the banks, are devoutly contemplating the ceremony, and applauding the constancy of the victim; who, animated by their admiration, and the strength of his own faith, keeps a steady and resolute countenance, till he arrives at the spot, when he springs from the boat, and is instantly swallowed up amidst universal acclamations. Five or six different persons of either sex, have,  
since

since our arrival, in defiance of nature, thus boldly snatched the crown of martyrdom.

BURNING a wife on the funeral pile of her husband, is certainly the most painful exaction ever made by superstition on human ignorance. It seems, however, to be outdone by this more splendid effort of fanatical zeal; and drowning at Allahabad appears to have superseded the use of the funeral pile. Of the latter I have heard but one instance since our arrival in these provinces.

IN a country where the despot is every thing, and the people nothing, immense public buildings are erected by the labour of his slaves. The fort of Allahabad, after all the cheapness of labour, must have cost millions. It is said to have been undertaken during the later years of Acber's reign, and to have been continued by several of his successors. It is an immense structure, so deeply founded on the brink of the two rivers, as to bid defiance to the assaults of both.

THERE is perhaps no building of equal size in Europe; this, however, is all that can be said in its praise; for it has not even the appearance of being capable of holding out against a battering train. It is as destitute of elegance as of strength; for though it contains an Imperial palace, and other ornamental buildings, it presents no idea to  
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the beholder but that of the monarch's power and his want of taste.

THE Royal palace, and its twelve adjacent squares, are a complete model of an Asiatic zenana. The upper rooms of the Imperial apartment command a view into each square, where probably were lodged the choicest beauties from the twelve foubudaries of the empire.

It is probable that this building, large as it certainly is, never contained one half of the wives of Acber; since it seems by the representation given by Abul Fazel, to be only a miniature of the Haram at Agra, his ordinary residence. The Haram there, he says, "is of such immense extent, as to contain a separate room for every one of the women, whose number exceeds five thousand. They are divided into companies, and a proper employment is assigned to each individual. Over each of the companies a woman is appointed *Darogha*; and one is selected for the command of the whole, in order that the affairs of the Haram may be conducted with the same regularity and good government as the other departments of the state.

"EVERY one receives a stated salary, equal to her merit. The pen cannot measure the extent of the Emperor's largesses; but the ladies of the first quality

quality receive a monthly stipend, from 1610 rupees, down to 1028. Some of the principal servants of the presence, have from fifty-one down to twenty rupees; and others are paid from twenty rupees up to forty.

“ AN estimate of the annual expences of the Haram being drawn out, the Mushreff writes a draft for the amount, which is countersigned by the Ministers of State; after which it is paid in a coin that his Majesty has caused to be struck solely for this purpose. This money is paid by the Grand Treasurer to the Paymaster-General of the Palace; and, upon a written order sent by the Mushreff of the gate, it is distributed among the inferior paymasters of the Haram, and by them paid to the different servants thereof.

“ THE inside of the Haram is guarded by women, and about the gate of the royal apartments are placed the most confidential. Immediately on the outside of the gate, watch the eunuchs of the Haram, and at proper distances are stationed the Rajpoots; beyond whom are the porters of the gates; and on the outside of the inclosure, the Omrahs, the Ahdeans, and other troops, mount guard according to their rank.”

“ WHENEVER the Begums, or wives of the Omrahs, or other women of character, want to pay their compliments, they first notify their desire to those  
who



who wait on the outside, and from thence their request is sent in writing to the officers of the place, after which they are permitted to enter the Haram. And some women of rank obtain permission to remain there for the space of a month.

“ BUT besides all the precautions above described, his Majesty depends on his own vigilance, and that of his guards.”

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## THE ANTIQUITY OF THE PLACE.

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*Allahabad,*      1798.

THE antiquity of this city is supported not only by the tales of ancient tradition, but by large fields of rubbish, which seem to attest its former splendour, as well as its remote origin. The soil for several miles, in the vicinity of the fort, consists of mortar, broken pottery, and brick-dust. The names of Neah Saar, and Pouranah Saar, are still kept up in the language of the place; and Piague was the ancient name which distinguished both of these flourishing towns, which probably occupied these extensive fields of ruins. The situation of Allahabad being alike convenient for the purposes of internal commerce and defence, must have early pointed it out as an eligible site for a town; and this circumstance affords no small probability to the reports of its former importance.

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THE present city, which is probably of the same date with the garrison, (the latter end of Acbeir's reign ) exhibits that picture of poverty, ruin, and desolation, which they only can form an idea of who have visited the towns of India. The men, tradesmen, bullock drivers, merchants, and mechanics of every description, necessary to the building of this immense garrison, will hardly admit of a smaller population than twenty thousand inhabitants to the city. For many years after, as this place continued to be the capital of a rich soubadary of the empire, this population probably increased. At present though the straggling huts cover a space of five miles, the inhabitants cannot much exceed sixteen thousand. Nine tenths of all the buildings are of mud, reared upon the foundations of more substantial edifices of brick, which have long since fallen to decay.

THE far greater part of the inhabitants of India, as well as of this city, may be said literally to  *dwell in houses of clay* . The walls are constructed of the common soil dug from the spot, and wrought up into a coarse mortar, by being mixed with water and brick-dust. A small stratum is added to the wall day after day, till the whole is completed. This precaution is necessary ; since the wall without obtaining hardness and consistency from the sun, could not sustain its own weight. Thus the Hindoo builds his humble dwelling with the same materials, and after the same method with the swallow ; the only difference seems to be that the latter, taught by nature, claims

claims greater antiquity, and a greater share of originality of invention; the former being evidently the copyist in this useful art.

THE buildings are all erected according to the caprice or convenience of each individual, who is guided by no rules either of taste or general police in the size, form, or situation of his dwelling. Hence the streets are sometimes wide, but oftener wretchedly narrow; and they cross each other in all directions with an irregularity which baffles description. This motely assemblage of houses, each roofed with tiles, or with a coarse thatch covering, to defend it from the sun and rains, constitutes the delightful *toute ensemble* of one of our largest provincial cities. That curse originally pronounced against disobedience, seems here to affect the houses, as well as their owners: for nearly one half of this town consists of naked walls, unroofed, and uninhabited, and fast crumbling down into that "*dust*" from which they were originally taken. If there be any exception from this observation, it is claimed by the *Shroffs* or bankers, and a few of the merchants. Their *Serais* or inns, seem to aspire to a sort of pre-eminence, in wretchedness, from their total want of furniture, and their peculiar marks of desolation. In these, however, you may sometimes observe a considerable number of travellers regaling themselves with their Hookahs, and retailing the news of the day with equal fluency, as your best coffeehouse politicians, and like them deciding on the fate of nations, and

the conduct of statesmen, with that happy confidence which ignorance or opinion alone can inspire. If the removal of pain and lassitude be an enjoyment, and if a profound insensibility to past or future evil be a pleasure, these Mussulmans are among the happiest of mortals. They drown care by intoxication with opium, as effectually as Horace or Anacreon could effect it with wine ; and though hostile to our system, they too literally fulfil one of its precepts ; “ they take no thought for to-morrow.”

THE only buildings in this vicinity, which have the smallest pretensions to magnificence, are the Cemeteries of the Mahommedans ; who, with a preposterous sollicitude, bestow more care and expence on the abodes of the dead than of the living. The finer mauseoleums of Sultan Chusero, and some other individuals of the imperial family, are stately edifices adorned with *jet-d’eaus*, and surrounded with a beautiful garden of ten acres of land. The sums necessary for keeping in repair these monuments of imperial grandeur, being long since withheld, they are rapidly hastening to decay. In different parts, the suburbs of Allahabad are occupied by numberless tombs of Mahommedan saints, each provided with a small niche, intended for burning a perpetual lamp, but the necessary funds are either exhausted or abstracted by their selfish posterity, so that there is reason to apprehend that even the memorials of their saints will not prove everlasting.

**I**N almost every town of this part of India, the burying grounds of the Mussulmans are sufficiently extensive for the whole number of inhabitants, though it is certain that scarcely a tenth part of the people of any district belong to that persuasion. Their number is decreasing daily, notwithstanding the casual supplies it may receive by adventurers from the north. In our seapoy battalions a Mussulman has of late become so rare, that the policy of having a proportion to balance any enterprise or combination of the Hindoos, can no longer be pursued.

**F**ORMERLY the towns in these provinces were governed by a certain number of magistrates, and their policemen, who inspected the markets and maintained the public order. A cutwal, a jemidar, and a wretched remnant of their establishment, still remains. Happily the Hindoo peasantry can be troubled with a smaller weight of authority than almost any people. If countenanced in their complaints they are litigious in the extreme; yet their misunderstandings are chiefly pecuniary; and from the small value of the contested property, they generally admit of an easy and summary decision.

**U**NDER the wretched government of the Vizier, you can hardly have any thing that merits the name of a judicial establishment. Every petty officer is the despot of his little district, whose fiat determines every question without appeal. Hence corruption is the very principle of the administration, and it pervades every

every part. As if law, equity, or humanity did not exist, the person aggrieved does not appeal to them, but approaches the magistrate with a present to interest his selfishness. A method invariably successful, unless counteracted by placing a heavier largefs in the opposite scale.

THE defects of this miserable system of judicature, are in many instances supplied by calling in the aids of superstition. A person who has a debt owing him which he wants influence or money to recover by a judicial sentence, applies to his Brahmin, who places himself directly before the door of the debtor, where he remains day and night without eating till the claim is discharged. In the mean time, no provisions, fire or water, can be introduced into the house, which is thus beset by a Brahmin. Should the debtor prove refractory till the Brahmin died, nothing on earth can redeem his family from the infamy thus incurred. The strength of prejudice, or the cravings of hunger, generally induce the debtor to satisfy the demand without incurring the dreadful sentence of disgrace in this life, and misery in the next.

THE British government which promises to hear and determine all disputes, has in some degree superseded this singular mode of prosecution; but in the Vizier's country, where I now write, the expedient is still necessary, and is sometimes put in practice: although even there the Brahminical rigour of discipline is somewhat abated. A Hindoo of considerable

considerable rank has assured me, that in former times not only the litigants but the whole village fasted so long as the Brahmin performed Dh'urnah \* before any house belonging to it.

\* This word signifies *to fast* ; but that phrase does not express the whole of the idea.

THA



**THE FANATICISM OF THE MAHOMMEDANS AND HINDOOS  
A BAR TO IMPROVEMENT IN AGRICULTURE.**

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*Allahabad,* 1798.

THE conquests made by Europeans in India have gradually operated as a remedy against the cruelties and exactions of a barbarous government in these provinces ; but another class of evils yet remain, which flow from the fanaticism or superstition of the natives ; and these are scarcely less numerous, though unhappily more incurable. The number of religious mendicants and vagrants of all descriptions, is so great as not only to check the operations of rural industry, but frequently to unhinge the police, and disturb the government under the most powerful sovereigns. Tavernier has estimated these wandering devotees at an hundred and ten thousand ; but from what we read in the more authentic histories, he is probably far below the actual number.

Mr.

Mr. Richardson, author of the Arabic and Persian dictionary, has well characterised them under the article Fakeer: "In this singular class of men, who, in Hindostan, despise every sort of clothing, there are a number of enthusiasts, but a far superior proportion of knaves; every vagabond who has an aversion to labour, being received into a fraternity which is regulated by laws of an uncommon and secret nature. The Hindoos view them with a wonderful respect, not only on account of their sanctified reputation, but from a substantial dread of their power; the Fakeer pilgrimages often consist of many thousands of naked saints, who exact wherever they pass a general tribute, while their character is too sacred for the civil power to take cognizance of their conduct. Every invention of perverted ingenuity, is exhausted in distorting and deforming nature; some, of the most elevated enthusiasm, striking off even their own heads on great solemnities, as a sacrifice to the Ganges which they worship."

DURING the reign of Aurengzebe, while that monarch was marching into the Deccan, his baggage was attacked and plundered by a number of these banditti almost in the face of the whole army. In the time also of this most powerful of all the Mogul Emperors, the Fakeers, instigated by a rich old woman, named Bistemia, actually raised a rebellion. This old woman was followed chiefly on account of her high reputation in the arts of magic and sorcery. Her enchanted pot was the skull of an enemy, in which

which owls, bats, snakes, and human flesh, formed a broth for frantic followers. No less than twenty thousand of these fanatics, led by Bistemia, were opposed by a General of Aurengzebe, who was instructed to resist her by spells put into his hand by that Emperor. This artifice prevailed; for a battle ensued, in which Bistemia and her whole army were cut off. Aurengzebe met his General after this exploit, and laughed with him at the success of his spells.

EVEN in our own times, many bands of these vagabonds have been attacked and dispersed by detachments of our troops. During the celebrated march of General Goddard, several hundred of these Fakeers, which he calls Pandarams, attacked and drove away some of his elephants and camels: these he soon recovered, by attacking in his turn the robbers, of whom he killed several: two thousand hovered in his rear, but the experience of their brethren taught them in future to keep at a greater distance.

BUT no effort either of British power or policy has yet provided an adequate remedy to the evils arising from this fanatical spirit; which by abstracting so many useful hands from industry, and by committing so many depredations upon property, continues to operate powerfully against the prosperity of India. The remedy applied by Aurengzebe, and several of his predecessors, is precarious and uncertain, and the  
most

Most unlikely to be ever practised by the present rulers of the country. It was his policy, (and it was that of Acber and Jehanguir), to assume a high tone of fanaticism, and assert such strong religious pretensions, as might either foil these religionists in a contest with their own weapons, or attract their veneration.

THE strange and impudent pretensions of Acber, the wisest of their monarchs, to the gifts of prophecy and inspiration, could hardly have been advanced from any other motive; and without some motive they are altogether unaccountable.

EUROPEAN authors afraid, perhaps, of gaining belief, have abstained from mentioning the religious extravagancies of this Augustus of the East; but Abul-Fazel, his own minister, may be trusted on this subject; and it is certain that he has employed many pages to prove his gift of inspiration; and has devoted a whole chapter to explain his spiritual guidance, or power of miraculous converting profligate unbelievers.

“ THE astrologers were apprised of this (viz. his inspiration), from the hour of his Majesty’s nativity, and whispered their exultations to each other. His Majesty, however, did for some time cast a veil over this mystery, that it might not be known to strangers. But that which the Lord willeth to be done who can avoid? In his infancy, he involuntarily per-

formed such actions as astonished all beholders ; and when at length, contrary to his inclination, those wonderful actions exceeded all bounds, and became discernible to every one, he considered it to be the will of the Almighty, and began to teach, leading many wanderers in the paths of righteousness.

“ MANY of his disciples, by the blessing of his holy breath, obtain a greater degree of knowledge in a single day, than they could gain from the instruction of other holy doctors, after a fast of forty days. Numbers of those who have bid adieu to the world, such as Sonnaſſes, Calendars, Philosophers, and Soffees, together with a multitude of men of the world, namely, foldiers, merchants, husbandmen, and mechanics, have daily their eyes opened unto knowledge. And men of all nations and ranks, in order to obtain their desires, invoke his Majesty ; considering their vows as the means of extricating themselves from difficulty ; and when they have obtained their wishes, they bring to the royal presence the offerings they had vowed.

“ FROM this great source of bounty, the following blessings have been obtained : success in business ; restoration of health ; birth of a son ; re-union of discontented friends ; long life ; increase of power and wealth. He who knoweth what will come to pass, gives satisfactory answers to every one, and applies remedies to their afflictions ; also many whose diseases  
are

be incurable, intreat him to breathe upon them, and are thereby restored to health."

THE manner of teaching by the Imperial Prophet is next described by this courtly writer, and it is no less farcical, than his pretensions to such a gift were impudent and absurd. When the disciple applies to his Majesty for instruction, Abul-Fazel observes, that out of his great wisdom he is very backward to comply; excusing himself by saying, "how shall I teach till I have myself been instructed?" But, adds the historian, if there be in any one evident signs of truth, and he is very importunate, he is accepted; and on Sunday, when the sun is in the meridian, he obtains his heart's desire. "From beholding these wonders, thousands of every persuasion have believed on him."

"THE person who wants to be initiated in all righteousness, places his turban in the palm of his hand, and putting his head on his Majesty's feet, saith, "I have cast away my presumption, and selfishness, which were the cause of various evils, and am become a suppliant, vowing to devote the remainder of my life in this world, to the attainment of immortality." Then his Majesty stretches out the hand of favour, raises up the suppliant, replaces his turban on his head, saying, "my prayers are addressed to heaven for your support, in order that your aspiring inclination may bring you from seeming existence, into real existence."

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To the practice of such contemptible mummery, did the great Acber submit; a monarch whose name is repeated in the East with exultation, and whose reign of fifty years constitutes the brightest period of the annals of Hindostan. It may be difficult to ascertain how far this conduct was produced by spiritual pride and fanaticism in himself; or by political views of attempting to guide in a harmless direction the enthusiasm of his people. It is however certain, that the remedy has been temporary and precarious: it has increased already the flame of fanaticism; in the hands of his successors the engine has often proved unmanageable. With them the ill extinguished flame has ever been ready to burst out afresh; and to guide the enthusiasm of the people, has been found to be the prerogative of him only who can sit in the whirlwind and direct the storm. Perhaps the tolerating principles of the British Government, administered by the moderation and good sense of individuals, may gradually allay and wear out the strength of a passion which no human power has ever been able to resist or controul.

SIR Thomas Roe, Ambassador of the India Company at the Court of Jehanguir, is the only English writer who notices this assumption of prophetic gifts as a part of the state policy of the Mogul Princes. His letter to the Archbishop of Canterbury, dated at Agimere in 1616, will shew that even in these early days of our connection with Asia, many efforts were made for the conversion of the natives, and  
from

From the sentiments of the monarch, much more sanguine hopes might have been entertained than circumstances have warranted since that time.

“ THE Mahommedan Mulhaves know somewhat of philosophy and mathematics, are great astrologers, and can talk of Aristotle, Euclid, and other authors. The learned tongue is the Arabian. In this confusion they continued to the time of Acber Shah, father to this king, without any knowledge of Christianity. Acber Shah being a prince by nature just and good, inquisitive after novelties, curious of new opinions, and excelling in many virtues, particularly in piety and reverence towards his parents, called in three Jesuits from Goa, the chief of whom was Jerom Xaverius of Navarre. After their arrival, he heard them discourse with great satisfaction, and caused F. Xaverius to write a book in defence of his religion, against both Moors and Gentiles; which, when finished, he read every night, and had some part discussed. Finally he granted them his letters patent to build, preach, teach, convert, and to use all their ceremonies as fully as in Rome, bestowing on them means to erect their churches, and places of devotion. In this part he gave liberty to all sorts of men to become Christians, even to his own court and blood, professing it should be no cause of disfavour. Acber Shah himself continued a Mahommedan, yet he began to make a breach in the law; for considering that Mahommed was but a man, and



a king as he was, and therefore revered, he thought he might prove as good a prophet as himself.

“ THIS defection of the king spread not far ; a certain outward awe withheld him, so he died in the formal profession of his sect. Jehanguir Shah his son, the present king, being the issue of this new fancy, and never circumcised, bred up without any religion at all, continues so to this hour, and is an atheist. Sometimes he will profess himself a Mahomedan, but always observes the holidays, and does all ceremonies of the Gentiles. He is pleased with all religions, but loves none that changes ; and falling into his father’s conceit, has dared to proceed farther in it, to profess himself for the main of his religion to be a greater prophet than Mahomed, and has founded to himself a new one, being a mixture of all others. which many have received with such superstition, that they will not eat till they have saluted him in the morning ; for which purpose he comes at sun-rise to a window, open to a great plain before his house, where multitudes attend him. When the Moors about him talk of Mahomed, he will soothe them, but is glad when any one will lash out against him. Of Christ he never utters a disrespectful word, nor do any of all these sects ; which is a wonderful secret working of God’s truth, and worth observing.

“ As

“ As for the new planted Christian church, he confirmed and enlarged its privileges, spending two hours every night for a year, hearing disputes ; often dropping words of his conversion, but to a wicked purpose. To give the more hope, he delivered many youths into the hands of F. Francisco Corsi, still resident here, to teach them to read and write Portuguese, and to instruct them in human learning, and the law of Christ. To that purpose the father kept a school several years, to which the King sent two princes, his brother's sons, who being brought up in the knowledge of God, and his Son our blessed Saviour, were solemnly baptized in the church of Agra, with great pomp ; being first carried up and down all the city on elephants in triumph ; and this by the King's express order, who would often examine them to see what progress they had made, and seemed well pleased with them. This made many bend the same way, being ignorant of his Majesty's intention ; others, that knew him better, supposed he suffered this in policy to render these children odious to the Moors for their conversion, the strength of his estate consisting in them.

“ But all men mistook his design, which was thus discovered : When these and some other children were settled, as was thought, in the Christian religion, and had learnt the principles thereof, as to marry but one wife, not to be coupled  
• with

with infidels, &c. the King sent the boys to demand Portugueze wives of the Jesuits; who thinking it only an idle notion of the boys, chid them, and suspected no more. But that being the end of their conversion, to get a woman for the King, and no care being taken in it, the two princes came to the Jesuits, and delivered up their crosses, and all other tokens of their religion, declaring they would be no longer Christians, because the King of Portugal sent them no presents, nor wives, as they expected.

“ THE father seeing this, began to doubt that there was more in it, than the boys discovered, especially seeing their confidence, that had cast off the awe of pupils; and examining the matter, they confessed that the King had commanded them. The Jesuits refused to receive their crosses, answering that they had been given by his Majesty's order, and they would not take notice of any such surrender from boys, but bid them desire the King to send one of those who are, according to order, to deliver all his commands, whose words are by privilege a sufficient warrant, and then they would accept of them; hoping the King would not discover himself to any of his officers in this pitiful plot. The boys returned with this message, which enraged the King; but being desirous of breaking up the school, and withdrawing the youth without noise, he bid them call the Jesuits to the womens door,

door, where, by a lady, he gave the order ; and without ever taking any notice since of any thing, his kinsmen were recalled, and are now absolute Moors, without any taste of their first faith : and here ended the conversions of these infidels."

## AGRICULTURAL PROCESSES IN THE DOOAB

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*Allahabad,* 1798.

THE expence and profits of husbandry in this part of India, it is not easy to ascertain, and there has hitherto been few attempts to illustrate this subject.

ON the banks of the Jumna, which I am now approaching, I have fortunately obtained a few sketches from a very intelligent officer \*, whose enquiries were made personally, and on the spot.

WHEAT is a principal crop in this district; and the land most favourable to it, is a rich sandy loam, a very common soil here.

WHEREVER

\* Captain Hoare, assistant surveyer.

• WHEREVER the land is situated beyond the reach of the river, manure is as necessary as it is in England ; and all sorts of it would no doubt be employed that did not interfere with the prejudices of the people. Human ordure is of this class, and unfortunately their predilection for cow-dung in plaistering their walls, and as fuel, operates against the extensive use of this important article in rural economy. The lands thus become so impoverished as to defeat the purpose of cultivation ; and when this is the case they turn sheep upon them, a slight substitute, and slow in recovering them.

THE commencement of rain in June, is the season when they begin to plough ; and a single stirring is only given till the period when they cease. The field is then ploughed fifteen different times before the reception of the seed, a circumstance which fully proves the inefficacy of the Indian plough. The harrowing, or rather rolling, is performed by means of a large log drawn twice or thrice over the land by two oxen. The ploughing, if it deserves that name, is performed with great expedition, from the lightness of the implements, and the slight impression made upon the soil. A biggah, which is reckoned one third of an acre, is tilled by one man and two cattle, many different times in a day. September and October are the months of sowing, and the quantity thrown upon a biggah is thirty seer, or nearly one Winchester bushel.

THE weeding of wheat is not an uniform practice, between the different ploughings, however, the labourers are employed in gathering up the roots of such weeds as might vegetate. When these operations are compleated, and the grain sown, vegetation proceeds with great rapidity; and the universal dryness of the cold season in India, imposes new labours upon the husbandman, who is obliged to water his crop three several times. The first watering is given when the grain has risen six or seven inches above the mould, and the successive repetitions of it as the convenience of the former, or the necessity of his fields may require. The watering land is a task far more laborious than the cultivation of it. Four bullocks, and three waterers, are with difficulty able to water an acre in nine days. In some situations the water is raised from wells in the manner I have described in a former letter; in others it is carried in bags, four men to each, from tanks. As these reservoirs may be at a greater or smaller distance, the labour and expence must be various; in all situations both are considerable.

THE price of labour is in this district, about two rupees, eight anas per month, or one ana and a half per day. The practice of giving perquisites in kind to labourers, which lately prevailed in Scotland, is found here: Each labourer, beside the wages already specified, receives one coarse blanket annually, and three, or sometimes four maunds of wheat at reaping time. The wages of a ploughman, reaper, and  
waterer,

waterer, are nearly the same; their emolument in a plentiful year, though only about three-pence of our money, yields a pretty abundant support; and where wages are higher than necessary to subsistence, the same pernicious idleness and dissipation, remarked in the labourers with you, are prevalent here.

THE protection of the seed and crop is necessary all over this country: so numerous are the predatory enemies of the poor ryot. A woman or a boy is placed to watch the field, and prevent the incursions of the deer and wild hogs; who as well as the birds are extremely destructive.

THE average produce of a biggah in this district, is reckoned fifteen maunds, the Ayeen Acbery states it at eighteen; but this must be understood of the best (*poulylands*) crops. An exact account of the taxes paid by each district, and the rent-roll of each proprietor, in the time of Acber, may be deemed a great acquisition, towards a statistical account of Hindostan; since it furnishes a point of comparison between that and the present time.

In every country artificers and tradesmen are necessary to aid the husbandman. Simple as the rural implements of the Hindoo are, he requires for their construction and repair the labour of a blacksmith, and sometimes of a carpenter. The pay of each for keeping one plough in sufficient order, and the other implements of a farm, is in kind, being twenty seer of



of wheat annually. Charitable institutions, and a stated provision for religious purposes, are also levied upon the farmer, who pays from fifteen to twenty seer yearly, for each plough he employs.

ANOTHER considerable burden is the maintenance of his cattle; a number are absolutely necessary to almost every operation, whether of ploughing, harrowing, watering, or thrashing. The last process is in the East more properly termed *beading out* the grain. It is performed by five or six oxen, travelling round upon the same floor; when employed in this labour, the muzzling of them is expressly forbidden by the Hindoo laws. But here necessity often supercedes it; and a poor Ryot, in a bad season, is compelled to limit the privileges of the ox, in order to preserve his starving family. Probably the Jews, who were bound by a similar precept, were also sometimes urged to infringe it, by the strong influence of the same motive. The herdsman is also a necessary part of the expence of keeping cattle; his pay consists of a blanket annually, and half an ana per month for each bullock; if, however, the herd is numerous, he receives only a limited sum for the whole.

THOUGH wheat be the prevailing crop on the Jumna towards Agra, and Delhi, it is by no means the only produce. On the contrary, the same practice obtains here, which I have elsewhere noticed, of sowing different crops on the same ground; particularly

cularly such as come to maturity nearly at the same time, *Jeaw* (barley), *muttur* (peas), some of the oil crops, and the yellow dye, called *kboosoom* (a marigold), are often mixed with wheat, a mode of husbandry followed in some parts of Britain, but always injudicious. Other miscellaneous crops are also sown, but not promiscuously with wheat, which come to maturity at different times; and this appears better husbandry, though perhaps still incorrect.

THE average rent of wheat land is about two rupees and a half per biggah, which is nearly one pound sterling per acre. One half of the produce is also a common rent, in this tract; and where that is the agreement, an overseer, on the part of the farmer and landholder, attends on the reapers, his wages paid by the latter: such overseers are common in every village. When the rent is paid in cash, a *Musbahut* (measurer), is employed, who receives one half ana for each biggah, under his charge: The same sum is allowed to the *Ameen*, or superintendant of the measurer.

THE extent of farms is in this country very limited, for it must bear a proportion to the capital of the tenant which is generally small: nor is there here the same opportunity afforded of adding to his stock, what he can raise by credit;

as

as the interest of money is so great, the expedient would prove ruinous. Hence the ploughman is frequently the occupier of the farm, and his interest in it is only annual. With one plough he can cultivate about sixteen biggahs, or five acres, an extremely small possession, but his wants and expenditure are equally limited. A small piece of cloth around his middle, generally with one coarse blanket, and a sort of turban, consisting of a cotton clout, make the whole of his wardrobe. His food is the cheapest grain and vegetables; a little ghee, with a pinch of salt between his finger and thumb. Such is the mode of life providence has allotted for many thousand years to the Hindoo farmer; a lot which the fanciful Abbé Raynal has painted as so angelical. His picture is indeed beautiful; but it bears not the smallest resemblance to the original.

If, however, the mere production, and preservation of human life, without any regard to knowledge or enjoyment, be an advantage, this state of husbandry may be regarded in a favourable point of view; for it seems as well calculated for population as any other. A family, consisting of a wife, children, and a few servants, maintained on every five acres arable, and as much waste land, implies a great number of inhabitants; and probably the whole of Hindostan is capable of being brought to this state. But the subsistence of such a family,

family, allowing one half of the produce to the landholder, seems to be reduced to two pounds ten shillings of our money ; a revenue so slender, as to exclude every idea of enjoyment except the preservation of life.

OF THE CULTURE OF THE PALM TREE, AND THE  
BAMBOO.

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*Allahabad,* 1798.

THE Palm tree, next to the bamboo, is the most universally useful which India produces; and is therefore cultivated in almost the whole peninsula, as well as in the islands. Of the three different species, the first and most useful is the *Cocoa* nut tree, which grows almost perfectly straight, to the height of forty or fifty feet; and is nearly one in diameter. It has no branches, but about a dozen leaves spring immediately from the top: these are about ten feet long, and nearly a yard in breadth towards the bottom. The leaves are employed to cover the houses of the natives; to make mats either for sitting or lying upon. The leaf when reduced to fine fibres, is the material of which a beautiful and costly carpetting is fabricated, for those in the higher ranks; the coarser

coarser fibres are made into brooms. After these useful materials are taken from this leaf, the stem still remains, which is about the thickness of the ankle, and furnishes firewood.

THE wood of this palm, when fresh cut, is spongy; but like that of the palm tree, it becomes hard, after being seasoned, and assumes a dark brown colour. On the top of the tree, a large shoot is produced, which when boiled resembles brocoli, but is said to be of a more delicate taste; and though much liked, is seldom used by the natives; because on cutting it off the pith is exposed, and the tree dies. Between this cabbage-like shoot, and the leaves, there spring several buds, from which, on making an incision, there distills a juice differing little from water, either in colour or consistence. It is the employment of a certain class of men to climb to the tops of the trees in the evening, with earthen pots tied to their waists, which they fix there to receive the juice, which is regularly carried away before the sun has had any influence upon it. This liquor is sold in the Bazars by the natives, under the name of "Toddy. It is used for yeast, and forms an excellent substitute. In this state it is drunk with avidity, both by the low Europeans and the natives; and is reckoned a cooling, and agreeable beverage. After being kept a few hours, it begins to ferment, acquires a sharp taste, and a slight intoxicating quality. By boiling it, a coarse kind of sugar is obtained; and by distillation, it yields a strong ardent spirit,

rit, which being every where sold, and at a low price, constitutes one of the most destructive annoyances to our soldiers.

THE name given to this pernicious drink by Europeans, is Pariah Arrack, from the supposition that it is only drank by the Pariahs, or outcasts, that have no rank. It is true that no Hindoo of any of the four casts is allowed by his religion to taste any intoxicating liquor ; and in general this restriction is only violated by strangers, dancers, players, and outcasts. There are, however, exceptions ; and I have myself seen a Hindoo confess that he was drunk, who did not seem to be deserted by his companions on account of that *faux pas*. The liberties which Mussulmans take with the precepts of their religion are notorious. The wine or liquor mentioned by Quintus Curtius as a drink of the natives, may have been the liquor used by the Greeks.

THE trees from which the toddy is drawn, do not bear any fruit ; but if the buds be left entire, they produce clusters of the cocoa nut. This nut in the husk, is as large as a man's head ; and when ripe falls with the least wind. If gathered fresh, it is green on the outside ; the husk and the shell are tender. The shell, when divested of the husks, may be about the size of an ostrich's egg, and is lined with a white pulpy substance, which contains about a pint and a half of liquor like water ; and though  
the

the taste be sweet and agreeable, it is different from that of the toddy.

IN proportion as the fruit grows old, the shell hardens, and the liquor diminishes, till it is at last entirely absorbed by the white milky substance; which gradually acquires the hardness of the kernel of the almond, and is almost as easily detached from the shell. The natives use this nut in their victuals; and from it they also express a considerable quantity of the purest and best lamp oil. The substance which remains after this operation, supplies an excellent food for poultry and hogs. Cups, and a variety of excellent utensils are made of the shell; many of which you must have noticed on our European tables.

THE husk of the cocoa nut is nearly an inch thick, and is perhaps the most valuable part of the tree; for it consists of a number of strong fibres, easily separable, which furnishes the material for the greatest part of the India cordage; but is by no means the only substitute which the country affords for hemp. This the natives work up with much skill.

THE Palmyra, or as it is called by the Portuguese the *palmeiro bravo*, a name borrowed from them by the English, is taller than the cocoa tree; and affords still greater supplies of toddy; because its fruit is of little request from the smallness of its  
size;



size; the produce of the tree is therefore generally drawn off in the liquid state. This tree, like the cocoa, has no branches; and like it too sends forth from the top a number of large leaves, which are employed in thatching houses, and in the manufacture of mats and umbrellas. The timber of this tree is much used in building.

THE Date tree being smaller makes not so conspicuous a figure in the Indian forest as the two last described. Its fruit never arrives at maturity in India: toddy is drawn from it, but not in such quantity, nor of so good a quality, as that which is produced by the other species of the same genus. The India date tree is therefore of small value comparatively with the palmyra, and that is much inferior to the cocoa.

THE Bamboo is the most useful of all trees to the natives: in India as well as China, this tree has degenerated into above fifty different species, which are applied in rural economy to still a greater number of uses. It is called by botanists *Arundo bambos*, and *Arundo arbor*, names first given by the Portuguese from the violent explosions it makes in the fire, caused by the expansion of the air between the knots.

PLINY speaking of this tree, has been guilty of an exaggeration, or, perhaps a mistake, in asserting that a single one is sufficient to make a boat: *Navigiorum etiam vicem præstant, (si credimus) singula inter-*

*nodic*. The truth is, that when made into a frame, and covered with a hide, it served this purpose in the same manner as the Coracles of the ancient Britons; and in this way it was frequently used by the troops of Hyder-Ally in crossing rivers. The bamboo in its natural state being no thicker than a man's thigh, cannot singly supply the place of a canoe.

WHAT is most remarkable of the bamboo is the rapidity of its growth, and the short space in which it arrives at perfection. Its immense height is completed in a single year; and during the second its wood acquires all that hardness and elasticity which renders it so useful for the various purposes to which it is applied. As the growth of the most rapid of our timber trees is incomparably slower, and the number fewer on the same space of ground, it may not be rash to affirm, that a single acre of thriving bamboos will furnish as much wood as ten or fifteen of any other tree.

THE joints either are, or can easily be made watertight, when they are used as pitchers for water, oil, or other liquids. This tree is often applied for making mats, and basket work, for the frames of slender houses, whose roofs are of the same material: its toughness and fissibility, render it peculiarly fit for all these purposes; as well as carts, beds, rigging of boats, and various other uses in rural economy.

THE thick inspissated juice of this reed, called *facar mambu*, is of a grateful taste, and has long been a favourite medicine in the East, without perhaps much accuracy of discrimination of the cases where it might be beneficial. This *facarum* is said to be still used by the *Hakims* in medical prescriptions.

THE bamboo grows in stools, of twenty or thirty from the same bottom, in the manner of our oaks after being cut over. It rises to a great height, spreading as it advances, till it meets with the adjoining stools; and thus it completely excludes the rays of the sun from the intervening arches; the colour of the reeds is at first green, and afterwards a pale yellow, affording to the natives a delightful retreat from the rays of the sun, and as some suppose, the primitive model of the Gothic arch.

OF THE MANUFACTURE OF SUGAR, AND OF SILK.

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*Chunar,* 1798.

It is fortunate for Great Britain that she is not dependent on her West India islands for the articles of sugar and rum, which are now become in some measure necessities of life to a large portion of the inhabitants. The havoc made by that destructive climate, will necessarily become more sensibly felt in proportion as foreign territories are enlarged; the mortality in time of war, among the troops necessary for the defence of these islands, must in time become so heavy a drain upon the effective strength of the nation, as may render it a politic measure to abandon them to their fate.

In that event, Bengal will furnish an ample supply of the above-mentioned articles, for its capacity of  
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producing them at a much cheaper rate is fully established \*. In the British West India islands, sugar costs the planter at an average 1l. 18s. per cwt. allowing the rum to defray the contingent expences of his estate ; while in Bengal it has been shewn by the best informed men in this country, that the same quantity can be manufactured at nearly 4s. 8d. sterling. The ease, simplicity, and cheapness of cultivation, will account for this great difference, in conjunction with the low price of labour, which, at a medium, does not amount to two-pence a day for each workman. In some places labour may be purchased still lower ; and being paid frequently in grain it is still more lightly felt by the cultivator.

THE utensils, stock, and slaves, are very expensive in the one country ; in the other comparatively nothing. A mill constructed of two wooden rollers, in value one rupee, with a few earthen pots, is the whole out-laid stock in many districts ; in others, where the cattle mill is used, the expence is still within the fortieth part of what the most trifling work would cost in the West Indies. The extensive wastes capable of producing abundantly, but unproductive merely from want of cultivation, afford a wide range for this culture, without much additional expence for the rent of land. In Jamaica we are informed, that to clear and settle a plantation capable

\* Vide an address to the Gov. General in 1788.

ble of producing 100 hhds. of sugar annually, would require an advance of 20,000*l.* for mills, utensils, and necessary erections. If even all these charges could be avoided, still the price of labour would prevent a competition in these islands, where it is said to amount to two-thirds of the whole cost of sugar. The planter who hires the labour of other slaves, which is frequent, and this is perhaps nearly the price at which labour can otherwise be procured, pays one shilling and seven-pence daily for each slave, or about ten times the wages of a Bengal labourer.

THESE facts have been submitted some time ago to the public, by a respectable merchant in Calcutta, and as they become more generally known, will perhaps bring the labour of slaves into greater disrepute, than general arguments against the equity of that traffic. They will probably suggest the propriety of employing the large proportion of shipping in the port of Calcutta in this trade, rather than allowing it to be engrossed by foreign merchants. American and Danish ships, or vessels under these colours, are annually increasing in the port of Calcutta; if by their means the foreign market be more cheaply supplied, the time may come when they may supersede in a great measure the other traders.

SUCH facts, if found true in experiment, will plead the expediency of relieving Great Britain, from the heavy burden of the defence of the West-Indies; and

and of exonerating its inhabitants from that enormous tax they pay in the high price of sugar, and of admitting the great body of the natives of India to employ their labour on a large branch of cultivation, for which nature seems to have adapted their country †. But it is the business of private individuals to state facts that come under their notice; to frame regulations is the province of their superiors.

WE have already noticed some particulars relative to the produce of silk, with which India seems to have supplied the market of Europe from the earliest times. Greece, Italy, and France have in subsequent periods supplanted the natives in this trade, in the same manner that America has done with regard to indigo.

A considerable quantity of silk is produced in the countries on the north east of Bengal, from wild worms, and worms fed on other plants than the mulberry. Some of this is exported to the west of India, and part reaches Europe. The Bengal silk produced in the filatures of the natives, is deemed inferior to the best Italian. That defect has not yet been accounted for; nor is it ascertained whether it be owing to defective manufacture, or a wrong treatment of the worms. Five varieties of the silk worm are known; but that is preferred, which, from its

† Vide remarks on the Agriculture of Bengal.

its name, has been deemed indigenous. When young they all require to be fed with leaves cut very fine ; but as they advance in growth, their food is less minutely cut, till at last the leaves are given entire. In little more than a month they arrive at their full size ; after changing their skin for the last time, they begin their cocoons. They are then removed into baskets, with separate apartments, where they spin their web. The cocoons being completed, a few are set apart for propagation, the rest are placed in the heat of the sun, to kill the chrysalis.

THE peasants sell their best cocoons to the Company's filatures : from such as are rejected, they wind off the silk. The cocoons, as a preparation for this, are put into a hole dug for the purpose, with the excretions of the worms collected from the baskets in which they were fed. A little water is then added, and the whole covered up to effervesce for two days. They are then removed and boiled in an earthen vessel ; when the silk is wound off by a hand reel.

THE expence of first planting the mulberry in a biggah of land, including ploughing, hoeing, weeding, and other charges, may at a medium amount to fourteen rupees ; and the charge annually after may be estimated at nine rupees. The plant is frequently sold to the feeders by the load, and the usual price is about twenty rupees per biggah ; if from this the annual charge of culture, and the interest of money.



money advanced during the first year be deducted, a profit to the cultivator of between three and four rupees will remain ‡.

THE several profits of the feeder, spinner, and reeler of silk, cannot be properly ascertained; but as the profits of different kinds of labour balance each other, they are probably very nearly on a footing. From one biggah of land two mauns of cocoons may be produced, at eighteen rupees per feer when reeled. The reeling is a tedious operation, and adds about a rupee and a half to the price of the feer of silk. Two feer of reeled silk is the produce of one maun of cocoons; and this on an average is reckoned worth fifty shillings.

THESE estimates to be accurate would require allowance for that silk of inferior quality used for the India market, which resembles that known in Italy by the name of Floretta. Another coarse produce is obtained from the fur picked off from the cocoons; it is spun into yarn, and manufactured into carpets.

THE hand reel in this country participates strongly of the simplicity and cheapness of all the implements employed by the natives. The wheel for cotton spinning may be constructed for a few anas; although.

‡ For a detail of these calculations, vide Remarks, &c.

though it performs the same work as our spinning wheels, and upon similar principles. I have only observed women at this employment ; and in a country where the manufactures are perfectly calculated for their labour, it is surprising how seldom they are employed. Industry can hardly be ranked among their virtues. Among all classes it is necessity of subsistence, and not choice, that urges to labour : a native will not earn six rupees a month, by working a few hours more, if he can live upon three : and if he has three he will not work at all.

CULTURE

## CULTURE OF OPIUM AND TOBACCO.

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*Benares, Nov. 1797.*

OPIUM is cultivated in this neighbourhood, and that of Patna to a considerable extent ; for it constitutes a branch of the commerce which Bengal carries on with Europe, China, and other parts to the eastward, of no small importance. The virtues of this vegetable production as a medicine have long been so well known, that they require no illustration. In Asia, however, this drug constitutes one of the luxuries of life almost in universal use. It supplies the place of fermented liquors ; and operates upon the constitution with equal violence. The Turks in Europe are fond of it to excess and so are the whole of the inhabitants to the east of India.

It is difficult to determine whether the use of opium or of fermented liquors is most detrimental to society :

society: unhappily the victims who fall a slave to either, are ensnared by a habit which they find it impossible to relinquish; because the constitution, when habituated to a strong stimulus, becomes incapable of carrying on the functions of life without continual excitement; which of itself brings on debility and premature decay. The Nabob of Oude; who died a few weeks ago, had accustomed himself to excessive dozes of it, which is said to have shortened the period of his life.

Opium is the produce of a species of the poppy, *Papaver somniferum*, whose root and stem become pretty large, and abound with a bitter juice. The stalk of this plant rises to the height of three or four feet, and produces oblong indented leaves, resembling those of the lettuce, while the flower has the appearance of a tulip. When at full growth an incision is made at the top of the plant, from whence there issues a white milky juice, which congeals before it is gathered. This operation upon the plant is repeated two or three times; but every succeeding produce becomes less abundant and of inferior quality. After these processes the opium is kneaded with water till it assume the consistence of pitch, when it is made into small cakes.

THE opium of Bengal, like the other vegetable produce of this country, is far inferior in strength to that of Europe; and this being perfectly ascertained it is administered by the medical practitioners in

far greater quantity : In part, however, this may be owing to the imperfection of the art of purifying among the natives.

THE culture of this drug is a branch of agriculture long known to the natives of these provinces ; but for the improvement and extension of it, they are probably much indebted to the interference of Europeans residing among them. It requires the best soil well manured ; and the crop demands much labour and attention, during its whole progress, while the produce is not reckoned equally valuable to that of sugar or tobacco. Except in a few situations, the natives are not desirous of cultivating opium. The money advanced by the contractor, and the expectation of his countenance and interest, induces them to embark in the business, rather than any sanguine hope of profit.

THE produce of an acre is more variable and uncertain under this than perhaps any other crop. It has been estimated at sixty pounds weight per acre by some, and at thirty by others ; the last is probably the justest average\*.

A small quantity of seed yielding oil to the value of two or three rupees per acre, is the grower's only advantage, besides the raw juice of the poppy which he

\* Vide Remarks, &c. p. 80 ; also Dr. Keir.

he delivers to the contractor, at a certain price fixed by the contract. The medium rate may amount to one rupee for five quarters of a pound weight of this juice.

THE poppy land must be thoroughly pulverised by twelve or fifteen stirrings before the seeds are sown ; and at that period, too it must be raised in ridges for watering : several weedings, a dressing of manure, and frequent irrigation, successively follow during the growth of the plant. That is no sooner completed, than a very considerable labour commences in gathering the juice ; during two or three weeks a number of persons are employed in making incisions with a small instrument in each capsule ; and in the morning they return to scrape off the juice exuded from the wounds.

A produce of between twenty and thirty rupees each acre is, perhaps, a more scanty reward for so much labour, than what is afforded by a crop of corn : But to Europeans the trade is fascinating : its actual produce almost never coincides with the true average. If insects, wind, rain, or hail destroy the crop of one season ; another year, peculiarly fortunate, perhaps enriches the whole cultivators. This hazard instead of checking, encourages individuals, in proportion to their hopes of personal good fortune.

THE raw juice being thus procured, the preparation of it is carried on under the immediate superintendence of the contractor. The process consists of evaporating the watery particles by the heat of the sun; which are replaced by oil of poppy seed, to prevent the drying of the resin. The opium is formed into cakes, covered with leaves of the poppy; and when sufficiently dry is packed in chests with the chaff of poppy seeds.

MUCH precaution is necessary in this process to detect adulterations, which are frequent both in raw and purified opium. The materials of adulteration are not easily discoverable. they have been supposed to be an abstract from the stalk and leaves of the poppy, and gums and resins of various plants.

THE facility of adulteration seems to justify the monopoly reserved by the Hon Company of this drug; perhaps too in a moral view it is defensible, as it is certainly a matter of sound policy to discourage the internal consumption of it among the inhabitants. In China it is prohibited §; but China notwithstanding is the great market for opium; for there, as every where else, vicious appetite is often stronger than legal restraint.

TOBACCO

§ Hoopoo's proclamation against it at Canton, Asiatic Regist. Vol III.

TOBACCO is a very general produce in the northern and western provinces: It requires as rich a soil as opium, and an equal share of manure; and therefore it is most frequently raised on the rich spots interspersed among the dwellings of the peasantry. It has been calculated that this article may be raised, shipped, and carried to market, at the low price of two rupees a maund, or about thirteen pounds sterling per ton. In every district where tobacco is raised, it requires a laborious cultivation, but more particularly in the southern districts where the ground is *made* for it. Transplanting is necessary, one or two weedings, and one hoeing with the hand; during the growth of the plant it is frequently visited by the labourer, to break off the heads of the stalk, and to pick the decayed leaves. When gathered, it is dried by being suspended on beds of withered grass, by means of ropes; but in this process it must be sheltered from the excessive heat of the sun, and from the dews of the night.

BETWEEN 16 and twenty mauns of tobacco is reckoned a medium produce from three biggahs, which yields a considerable profit to the grower, though valued only at a rupee each maun. In these provinces a sufficient number of hands, and perhaps a sufficient quantity of land could be afforded for the supply of the whole market of Europe. Some attempts have been made to export it thither; but it is conceived that the species cultivated here is too weak



to suit that market. From what I have observed with regard to the flavour and strength of other vegetables produced in this climate, I should conclude the Bengal tobacco to be weaker, though of the same species; but admitting that the article could be produced of the same quality, and prepared to fill the Europe market, it is probable a less produce would be drawn at an average from the acre, because a greater extent of cultivation supposes an inferiority of soil, since the choice land is already occupied.

THE known enterprize of Europeans would however probably more than counteract every adverse circumstance, whether arising from the soil, or the distance of the carriage. The effect of large capitals invested in the trade, would go to reduce the original cost, which has hitherto been enhanced by the number of intermediate dealers on small stock.

IN the Indigo branch, European capital and enterprize has already been attended with this consequence. This dye, from its name, (*Indicum*) appears to have been known in the country from the earliest times; and till supplanted by the American produce actually supplied the European market. The capital of Europeans, and their skill, has again extended the exportation perhaps beyond its ancient limits, certainly beyond the former quantity.

It is not from raising small parcels on a few liggahs of ground, that competent skill or economy of labour can be acquired. Yet this has been invariably the management of natives in the culture of tobacco and indigo. In the latter some improvements indisputably valuable, have lately been made, particularly in the seasons of sowing, and the number of crops; in drying the stuff by artificial heat; in contriving a process to prevent injury by worms; and in the superior fineness of the article.

By these means, from being an inconsiderable produce, the indigo has become an object of great importance; and it is probable that the same enterprise, were it applied to the culture of tobacco, and other articles, would be rewarded with similar success. The docility of the natives, their poverty, and want of ambition, though adverse to them as proprietors of works, on their own account, qualify them for servants to Europeans. Employment under them for a certain monthly hire would prove a vast melioration of the condition of thousands in India, and add to the trade and comfort of the country.

THEY who have a system to maintain, must defend it at all hazards; it is for them to rail against monopolies, and reprobate all connection with Asia; but an unprejudiced person who has resided any time

time in the country must have discovered an infinite number of advantages which European intercourse has produced, and which it must continue to produce. The ingenious arguments of Dr. Smith upon this subject, are pleasing in a system of commercial freedom ; but are in many instances inapplicable to human affairs.

SALTPETRE

SALTPETRE AND OTHER ARTICLES PRODUCED IN THE  
DISTRICT.

.....

*Benares,* 1798.

You must frequently have heard mentioned the common process by which saltpetre is obtained from earth impregnated with its particles. It is reproduced in the same earth in the course of two years, when the process may again be repeated with equal success. In the second process a small portion of fresh earth must be added, to prevent the nitre from running into too small crystals. The tracts parched by the hot winds, form a boundary to which this manufacture is limited; and it has been observed that during these winds the production of nitre is the most abundant. It has been supposed, that as the hot winds have lately, in the change of seasons, extended their influence into the province of Bengal,

the manufacture might succeed in the lower districts.

SALTPETRE is at present manufactured in Behar, and the provinces west of it, to the annual amount of 200,000 mauns. The price to the India Company, who export the far greatest part of it, is about two rupees per maun. The rest paying duty and carriage, with profits to intermediate dealers, rises to double the above price. The trade during the present war, has been prohibited to private dealers and foreigners.

THESE provinces have been found to produce this article at one third less expence than it can be furnished in Europe, and must therefore be able to command the markets there, in the event of a fair competition. The very nature of the article supposes the necessity of every government maintaining establishments for its manufacture. A monopoly of it in the hands of one nation would lead to consequences highly interesting to every other. Notwithstanding this circumstance, the far greater part of the demand of Europe will be supplied from this quarter so soon as trade is permitted to run in its natural channel, by being more fully understood. There has appeared a calculation tending to prove that saltpetre may be imported from Bengal to Europe at 25l. per ton, whereas that manufactured in Spain costs from 90l. to 100l. sterling.

It is probable that the importance of these provinces has never yet been fully discerned, nor their value felt. Time, and more liberal ideas of commerce, will discover other branches of trade which India may advantageously carry on with Europe. We are at present indebted to Portugal for the annual supply of raw hides, to the amount of nearly a million \* ; an equal quantity might be furnished by Bengal on terms perhaps equally advantageous.

WE have already mentioned the buffalo as an object of natural history, and an instrument of rural labour; but that animal is still more valuable as affording an article of commerce: The black cattle of these provinces, including the buffalo, have been estimated at 200,000,000; taking the number at one tenth part of this estimate, a supply equal to that of Brazil might easily be obtained. This has been reckoned 120,000 annually, a number probably much inferior to the casualties of this part of India, where the currier seldom thinks it worth his trouble to skin any animal dying a natural death. A cowhide, after tanning, costs eight anas; that of a buffalo being larger, may bring ten or twelve. At two rupces each, hides tanned in the best manner which is known here, might be shipped for Europe; perhaps they may be furnished at a still cheaper rate.

FROM

\* Vide Remarks, &c. p. 140.

FROM Hurdevar to Cape Comorin, the British nation possesses either dominion or influence; and this vast tract of country which contains almost every soil and climate, will probably be found capable of producing every article hitherto deemed peculiar to China or America. It is certainly a wide and untried field for experiment, of which in all human probability the indolent and unambitious natives would never have availed themselves. That they have fallen under the guidance and dominion of a more enterprising people, may perhaps be one of those destinations of Providence of which, as we are incapable of foreseeing the consequences, we must be unfit to appreciate the wisdom. However this may be, the conclusion is fair, until experience contradict it; that as India has been found to contain birds, animals, insects, and plants similar to those of other countries in the same latitudes, it must possess every essential requisite for similar productions to exercise the industry of the manufacturer, or to reward the labour of the poor.

A Gentleman, equally distinguished for his humanity, as he is by an extensive knowledge of the situation of India, states, "that no public provision exists in our provinces to relieve the wants of the poor and helpless. The only employment in which widows and female orphans, incapacitated from <sup>severe</sup> labour by sickness, or by their rank can earn a subsistence, is by spinning: and this is the only employment to which the female part of a family can apply

ly, to maintain the men, should they be disqualified for labour by infirmity or otherwise. To all it is a resource, which when not absolutely necessary to their subsistence, contributes at least to relieve the distresses of the poor. These distresses are great, and of none greater than of the many decayed families who once enjoyed the comforts of life. These are numerous in India, and whether entitled to the consideration of Government or not, they have certainly a claim on their humanity."

SUCH considerations have suggested various employments to this benevolent writer, which might contribute to their relief, while they added to the commerce and prosperity of the country. He proposes cotton yarn, which could be imported into England from Bengal cheaper than cotton wool. He alleges that linen and woollen yarn are imported from Ireland to the large amount of 330,000 pounds annually; and contends that if no injury be sustained by the manufactures of Britain from this circumstance, they would be equally uninjured by the importation of cotton yarns from Bengal. This reasoning he applies to cotton wool, silk in the cocoon, and filature and wound silk.

DIFFERENT species of wood for the dyer, and the cabinet-maker, are also recommended instead of that employed in dunnage. The gums, and vegetable oils with which England is supplied from foreign countries, are the product of these provinces; and the



the exportation, he argues, would reward the industry of the native inhabitants. Tincal, borax, sal ammoniac, and various other articles might be procured in this country; but probably not on equal terms: and as often as this happens the operations of the manufacturer, and the speculations of the merchant will be guided, not by the wishes of the benevolent, but by their own views of private advantage.

THE man who begins a new branch of manufacture, and carries it on with perseverance, is the most useful member of a community. His money circulates among the laborious poor, and is more beneficially bestowed than if the same sums were bestowed in charity upon the indolent. Such enterprises, however, are in general undertaken from views of private and individual emolument: and to stimulate to such exertions it is necessary first to prove that they are likely to be lucrative. If by any means the number of private adventurers to India be increased, there can remain no doubt of their enterprise or emulation: an excess of these qualities has often been their fault, and the punishment of it their ruin. The Indigo trade affords too many proofs of this fact; nor is there any business in the hands of Europeans that does not illustrate the truth of it. That spirit which induces a man to combat every sentiment of affection, whether for his country or his friends, and prompts him to abandon them with so much personal

personal risk, is a full security for the enterprise of almost every trader in India.

THIS character of the British merchants is conspicuous in Calcutta ; and it affords a strong presumption, that trading in the various articles above enumerated, holds out no prospect of advantage ; otherwise it would have attracted the notice of so discerning a body of men : nor is it to be urged that politicians, or embarrassing regulations have prevented this. The ingenuity of merchants has found means of evading or surmounting almost every regulation that militated against their interest.

OF HARVESTING, &c. IN UPPER INDIA.

.....

*Chunar, March 1798.*

THIS and the subsequent month constitute the harvest season in those districts where wheat and barley are the prevailing crops, and where from this elevation the inundations of the Ganges do not convey moisture or fertility for the production of rice.

OF the various mixture which has grown on the same field, flax and mustard are the first ripe. These are both destined for oil; and when pulled and trode out, the seed is secured in baskets, till a convenient period for bruising it arrives. The treading out is performed in the open field, on a smooth spot, that has been levelled and prepared for the purpose, so that the seed and chaff can be swept up as easily as from a barn floor.

ON

ON some fields the barley and flax are reaped together ; or are pulled up by the roots if the crop prove too short for the sickle. More frequently, however, the flax and mustard according as they ripen, are gleaned from the other grains. In the same manner the flowers are picked from the yellow dye, and dried for preservation : thus by collecting the different crops as they ripen, the wheat or barley which remains, is greatly injured by being successively trampled in these different operations. The practice of multifarious crops, if censurable with you who reap all sorts at once, must prove much more objectionable where so much pernicious waste is occasioned by the feet of the reapers.

THE harvesting of the natives, like all their other labours displays much more bustle than dispatch : you may perceive some hundreds straggling through a field without any method or regularity. Some pick the flower of the dye : others cut flax, some gather mustard while several are collecting into bunches what is reaped, and carrying them to the threshing floor. A Company of reapers with you are so stationed at their labour, that you can judge easily both of the quantity performed by each workman and the manner in which he executes it. Among them emulation stimulates to exertion and cheerfulness here every one saunters through the field as he pleases, and no one performs nearly one half of the work that might be dispatched by a more judicious distribution,

A Hindoo reaper turning out to his work, scarcely recalls to your mind the image of a European labourer; while his head is wrapt up in a profusion of dirty cloth, the rest of his body is almost naked; and the cold of the mornings at this season makes his limbs shake more like a person about to fall down in an ague than a reaper going to perform a day's labour. In one hand he carries a very small hook, in the other rope, with which he carries home all that he cuts during the day.

THE use of cattle in carrying the crop is seldom practised; nor is to be ascribed altogether to the badness of the roads, for at this season the soil is every where dry and firm, but to the small quantity cut down, which is frequently not more than the reaper can carry. Threshing being often performed in the field, the straw becomes still more easily conveyed from the diminution of weight. On the field the wheat, barley, and flax are much higher than they are in England; while the Palma Christi, the Indian corn, and the Badjera †, are far more bulky than any produce of English husbandry. They rise from eight to twelve feet in height, and are often so thick that they are impervious to the air. The sugar also grows pretty tall; and from its great closeness must stagnate the air: so that did not experience contradict it, you would conclude that it enriched rather  
than

† A kind of millet.

than impoverished the soil. The leafy and leguminous plants do not uniformly enrich the land upon which they are raised; some of them as tobacco, draw so much nourishment that stagnated air cannot supply the waste. Tobacco land, as well as sugar fields, must therefore be invigorated with manure.

MUCH of the wheat and barley here, as well as of the rice, is lost by over ripeness. The labour of harvesting so many crops, all coming forward nearly at the same time, is too much for the farmer to overtake. Some kinds, like the flowers of the yellow dye, must be picked for several weeks at intervals, from the succession of flowers coming forward gradually. The barley, therefore, which is a common mixture with this crop is not only repeatedly trodden, but often drops before the labourer can afford time for cutting it down.

NEITHER the different fields, nor the separate possessions of Ryuts, are parted by hedges as they are in England; but here shelter is less necessary, as the extraordinary height to which some of the crops rise yields sufficient shelter to all in their vicinity. The pasture lands being generally in a barren or waste state, and lying at a distance, dykes become unnecessary for their defence. Should, however, the country become completely occupied, or husbandry carried on with greater vigour, fences and inclosures would be found as necessary as they are in Britain, and an equally valuable acquisition in husbandry.

Artificial

Artificial grasses could never be preserved without fences ; nor has the substitution of a herdsman on clay soils ever answered the end of protecting them. By trespassing for a few hours, the feet of black cattle have been found entirely to ruin a field of sown grasses.

HERDING of sheep, cattle, and goats, is common not only in Behar, but over all India ; and there is reason to believe that a more certain criterion cannot be afforded of imperfect husbandry ; for without rest, pasturing cattle never thrive. Here, where the pastures are common to a whole village, each tenant seems to put to it as many cattle as he chooses. The land is overstocked ; the cattle starved ; and instead of a greater profit, the wretched peasant does not reap the half of the benefit that a third part of his stock, properly fed, would yield. Examples of this wretched management are two frequently under your observation to require any comments from me upon the subject. Here, however, the system is beyond all measure more pernicious, from the length to which it is carried. I have met a drove of some hundred cattle coming in from this wretched pasture, not one of which would have weighed against your best sheep. The black cattle and the hogs are barely kept alive ; the hogs and sheep on a short pasture make a better subsistence, but are never fattened, unless at the stall.

DURING

. **DURING** the dry season, and more particularly the prevailing of the hot winds, every thing like verdure disappears ; so that on examining a herd of cattle, and their pasture, you are not so much surprised at their leanness, as that they are alive. The grass cutters, a class of servants kept by Europeans for procuring food for their horses, will bring provender from a field where grass is hardly visible. They use a sharp instrument, like a trowel, with which they cut the roots below the surface. These roots, when cleared of earth by washing, afford the only green food which it is here possible to procure.

OF the artificial grasses, none have ever been attempted so far up the country as the place from which I now write. The hot winds would in all probability not only scorch the portion exposed above ground, but would penetrate so far into the earth as would probably prevent them from shooting up in the succeeding rains. With regard to the raising of turnips, cabbages, carrots and greens, experiments sufficiently decisive have annually been made in the gardens of Europeans. Here these articles are all raised during the cold months, but no art can preserve them against the deadly influence of the hot winds : though in each garden a supply of water is daily drawn by two bullocks, these vegetables are now languishing, and before the end of the present month they will perish in spite of every effort to preserve them.



ALL the different particulars, which have hitherto been occasionally noticed, will not enable you to form a just estimate of Hindoo agriculture, unless the practical effects of their numerous prejudices are taken into account. One which I have not yet mentioned, operates very prejudicially; it is the unfair competition established between the Ryuts of different casts. A person of the rank of Brahmin obtains not only his lease on easier terms, but has several exemptions, to which his inferiors are exposed. A Ryut of the other classes is still more favoured than the Chumars, though not on a footing with the Brahmin: a person of the latter cast has an ingenious method of enforcing payment of a debt, or indeed of any claim which could not be practised among a people less enslaved by the priesthood. He places himself before the door of the unhappy debtor, and vows never to leave it till he obtains his demand. Should this not produce the effect, he threatens to starve himself to death before his door; and such is their terror for this consequence, which would excommunicate the most considerable family, and forever ruin it, that no demand is ever refused, even though unjust.

THE person before whose door a Brahmin had starved, would be regarded as the most infamous and abandoned of men; and as such could expect no countenance from society. In the exaction of rent from persons of higher cast much more lenity and indulgence is shewn, than to the lower orders. Thus  
the

the Hindoos suffer all the evils resulting from an unequal state of society; without participating in almost any of its advantages. In Europe, the speculative, the opulent, and even the idle, either add to the conveniences, the amusement, or the elegance of society. Here the indolent Brahmin ministers to neither: his knowledge does not enable him in one individual of a thousand, to instruct society either as an author or a teacher: above the rank of a labourer his industry is not only destroyed, but his indolence becomes pernicious as an example; while the splenetic habits of the religionist prevent him from mixing in society, or contributing to its lustre or elegance.

THE prejudices entertained against many kinds of wholesome food, which are nourished and upheld by the precepts and example of this order, we have already noticed, injuring agriculture in some important particulars, and preventing the whole people from pursuing several of the most approved branches of rural economy. The number of holidays which frequently interrupt rural labour, are at some seasons particularly inconvenient; while the constant practice of every individual going to the river to bathe and carry water, is a serious encroachment upon harvest labour, which a more accommodating system would have avoided.

✓ To these considerations we must also add the mean and imperfect implements employed in every department of husbandry; the inferiority of their working cattle,

cattle, and deficiency of roads, and every adequate means of land carriage: these are circumstances which whether regarded as the causes or consequences of imperfect husbandry, are certain proofs of its backward and unpromising state. Such, however, are the circumstances and actual condition of a people who are frequently represented to Europeans as in a very high degree of improvement in all the arts, and as having carried many to the *ne plus ultra* of perfection.

PARTICULAR

PARTICULAR BRANCHES OF RURAL ECONOMY IN THE  
DISTRICT.

.....

*Benares,* 1797.

THE internal commerce of Bengal is carried on, as we have seen, chiefly by craft on the different branches of the great river; some part of it is also conveyed by land carriage, from the different places where produce is manufactured, to the banks of those rivers, or to market. In both cases the carriers are merchants, who do not often hire their carriage, but purchase at one place what they sell at another.

WE have yet but little account of the (dandies) boatmen; when employed by the natives they receive little more than their food, which is furnished commonly in grain, with a small allowance of money for the purchase of salt, tobacco, and a little cloathing.

THE rate of freight charged by the owners of these vessels is so much per maun of their burden : estimated at three rupees per hundred maun, when carried an hundred miles \*. When the boats are employed by the owners on their own account it is believed that they transport goods at a much smaller expence. The average rate of travelling with, and against the current, may be reckoned twenty-five miles ; hence a ton is carried for that distance for less than sixpence of our money.

THE land carriage is managed with an equal degree of economy. It is most commonly performed by oxen ; sometimes by the small horses of the country, and occasionally by buffaloes. The latter animals, though stronger, and more docile than oxen, are less easily maintained. The carrier allows his cattle no grain, seldom even straw ; the gleanings occasionally made on the road-sides are the whole support of the oxen, a fare too slender and precarious for the buffalo.

THE tear and wear of cattle †, and the subsistence of one driver to four oxen, is all the positive expence of land carriage ; which at a medium has been estimated at half an ana per day for one maund. The  
use

\* Vide Remarks on the Agriculture and Commerce, &c.

† The price of a carrier's best oxen is about eight rupees, and their burden is from four to six maunds.

use of carts were it practicable, would greatly increase the facility of land carriage. But except in the neighbourhood of military stations there are no roads in this part of India. The country affords no substantial materials for their construction; and those magnificent cawseways which facilitated intercourse under the native princes, are hardly discernible.

FROM such instruments of conveyance you may conclude, that the internal commerce of this country, notwithstanding its natural advantages, is in a languid state. In fact, the exportation of grain from corn countries, and the importation of salt, constitute the principal part of this commerce. The importation of cotton from the western provinces, and the exchange of tobacco, and beetle nut, form almost the whole supply of internal consumption. Piece goods, silk, saltpetre, opium, sugar, and indigo pass almost entirely through the hands of the Company.

THE internal duties which form the basis of an estimation of the commerce, have been abolished. From their former amount of eight per cent. on the real value, the whole annual amount of internal commerce, excluding the Company's investment, has been estimated at three millions and a half; of which one passes through the hands of the Company by the monopoly of salt. The internal conveyance of grain is conducted entirely by the natives; this alone has been stated at two millions, exclusive of that supplied to towns by their immediate vicinity.

DURING

**DURING** a short excursion in the vicinity of this city I have had an opportunity of examining the state of the wheat and barley crops, which are nearly ripe. They are inferior to the same crops in Britain, and particularly in length. The barley, or rather big, for it is all of that inferior species, does not exceed twelve or fourteen inches in height; but where the land is in good order it is a close crop, and yields plump grain. The wheat is bearded, and would please you worse than the barley; it never rises above the height of two feet, and would in England be reckoned a light crop. The preposterous custom of mixing the yellow dye with the white corn, hurts the eye of a farmer, and occasions the one crop much injury by reaping the other, independent of the mischief of crowding the grain.

**SUGAR** is a frequent produce in this district, which is reckoned one of the richest in India. I have had occasion to admire the simple apparatus employed by the natives in expressing the sugar, and boiling it. A stone mortar, and wooden piftern, turned by two small bullocks, the whole not worth twelve rupees, constitutes the expence of the operation. The pots used for boiling are of the common earthen ware, every where made here. By a judicious mode of placing these under ground, and introducing the heat by a draught of air, like that in a furnace, a small quantity of fuel is sufficient.

• HERE as well as in the West Indies, the sugar harvest is a busy but joyous season. The native labourers grow plump and well conditioned on the offals and little perquisites about a sugar work. All the different operations of cutting, grinding, and boiling, are carried on at the same time, which occasions a bustle on the farm rather exhilarating than oppressive. It is such a scene as your stout reapers exhibit, when they see before them the close of a harvest labour, or when bringing the last sheaves into the barn-yard.

AFTER the tragical, and too pathetic descriptions which we read of the late peculations and oppressions of Benares, I was happily disappointed, when I saw the subject before me, unvarnished by rhetorical art, but richly covered with natural luxuriance, or with the produce of rural labour.

THE numerous groves, (Topes in the language of the country), give the whole province the appearance of a forest; and afford an agreeable shelter to cattle, and a retreat to the traveller from the noon day heat. It is deemed a most meritorious act, in the eye of religion, as well as a civil duty, to plant a tope of mangoes. The fruit is rich, and nutritive; and affords one happy, but rare example of the coincidence of Hindoo prejudice with the dictates of morality, and the emolument of the peasantry.



THE trees when planted, belong often to the planter, and not to the proprietor of the soil; the former pays the latter a certain proportion of the fruit as a ground rent. I had here an opportunity of seeing the estate of a Zemindar, who, though owner of the land, was not entitled to the fruit of the lopes; nor was the tenant an European to whom he had let a great part of his property. The complicated proprietary right was in this instance shared by four parties; government, the zamindar, the European tenant, and the planter of the mango trees: 1. to these you add the vague and unsubstantial interests of the Subah, and Emperor of Hindostan you will have some idea of that chain, whose links constitute the different bonds by which property is held in India.

ON the estate of this Zemindar, too, I visited a small, and almost inaccessible mount, which had lately been conferred on a devotee. The whole was planted with fruit trees and vegetables, among which this holy person lived, without the cover of an house, and performed the rigid farces of ascetic devotion before the multitude. While this devotee pretended to renounce all the concerns of this material world, and its gross allurements, it was plainly observable, that he had found opportunity of snatching a glance at his neighbour's farm several shreds of which he had actually appropriated to himself, by gradually extending, during night, the limits of a paltry hedge. Zeal operates in every direction; yet active as it is, it cannot always counteract the movements of carnal appetite,

appetite, or check the growth of our selfish affections. Nor have the good Fakeers, who have undertaken to lead men to heaven, by the force of holy example, been always able to defend themselves from the inroads of these passions. Happy were it for mankind, did this consecrated mount at Benares, alone display an example of the imperfection of piety, or were it the only monument of the instability of human virtue ; but alas ! it is whispered even here, that the Fakeers, the most sacred portion of a religious people, frequently apply for medical assistance in a disease which is seldom contracted but in the triumphs of incontinence over the frailty of nature ; and that amidst all the seeming mortification and austerity of their lives, and the sacred vows by which they are bound, these religionists too frequently display the passions of the man rising upon the ruins of the saint.

OF THE SALT MANUFACTURE, AND COLLECTION OF  
REVENUE.

.....

*Chunar, Feb. 1797.*

THE labours of the Hindoo are certainly not more oppressive in general, than those of the European. The toil of the Molungees, (salt makers), however, is an exception ; for it is, both in its nature and duration, the most pernicious and slavish employment in this, or perhaps in any country.

“ A large proportion of the salt made in Bengal is manufactured in desarts, overflowed every-tide by the sea ; and the climate of these desarts is inimical to every constitution \* ” All the complaints occasioned by heat and moisture, appear there in their most

\* Vide remarks on the agriculture and commerce of Bengal.

most malignant form : Dysenteries, at one season, are peculiarly fatal. The unhappy victims of this disorder are avoided as infectious by their companions, and suffered to pine without receiving either that aid or consolation, which compassion usually pays to the wretched. The progress of the disorder, in such circumstances, leads to certain death, if that event be not anticipated by the tigers and alligators, by which these dreary wastes are infested.

THE tigers, accustomed to human blood, boldly attack the salters ; while the alligators are always ready to assail each unfortunate individual who may stray from his companions.

THESE are not the only evils to which the Molungees are exposed : their unhealthy and dangerous employment carries them to a distance from their families, where their provision, and even water is supplied by a long carriage. From choice, therefore, a native will not engage as a salter ; and this circumstance occasions a species of slavery to be established in this manufacture in many countries, which with you remained till very lately, but which here has yet received neither remedy nor alleviation. Whoever has once laboured at the salt works, is bound himself and his posterity forever to continue in that occupation.

FROM the great mortality incident to their employment, the salters do not keep up their members, but

the annual waste, like that of the slaves in the West Indies, is continually supplied by unjustifiable artifices, in procuring fresh recruits.

LABOURERS are either decoyed to these works by false representations, or they are compelled, on alleged proof of their profession, to engage in them. This proof, it is said, frequently consists of perjured evidence, which is here never difficult to attain; or is supported by the *ordeal*, that mock evidence which characterises a barbarous system of jurisprudence.

THE salt revenue is so considerable, that the trade cannot be laid aside, nor can an article of living so necessary be abandoned. Several improvements have been suggested to render the process less prejudicial to the workmen. It has been proposed to manufacture salt in less unhealthy situations, or to import it from the Coromandel coast. A duty has been proposed, instead of the monopoly in the hands of the Company.

THE annual sales have amounted to one million sterling; and the neat revenue after deducting charges, has been so considerable, that no adequate compensation for so important a sacrifice can easily be found. Hence the unfortunate Molungees continue in the most wretched of all slavery.

THE salt agents employed by Government, cannot justly be charged with the sufferings of these people, arising

arising from the local situation, or the malignity of the climate. They are not, perhaps, chargeable with the methods practised in procuring the devoted individuals to engage in these works. The necessity of having them supplied, has however been supposed to render them negligent in scrutinizing the means made use of for that purpose: What we would conceal from ourselves, or what we wish not to know, we must always be little inquisitive to learn.

THE expected free revenue arising from the sale of salt, is said to be no more than forty-two lacks: some have argued that this revenue might be made good by imposing a duty on the article of one rupee each maun; and contend, that the increased consumption, on lowering its price, would render this sum perfectly efficient.

A different arrangement in the salt trade is, perhaps desirable in another view: The high price of the article has compelled the poor to a more sparing use of it, than appetite dictates, or health requires. The quantity they employ is certainly small, and were salt a luxury, and not a necessary of life, you would desire to see them more amply supplied.

THE charges and advances upon the salt manufacture, are stated at thirty-nine thousand pounds, or nearly forty per cent. on the whole amount of the sales. The number of workmen employed, the small quantity of labour performed under the immediate  
Inspection

inspection of native superintendants, occasions a very heavy expenditure. The expence of the collection of every description of revenue here, is certainly large, and the number of subordinate officers is beyond all proportion greater than with you. It is probable that some laxity in the management takes place, as very large fortunes have been frequently amassed by individuals in the revenue department, while no class of men are more lavish in their expenditure.

THE gross rent paid the landholder in Bengal, is by a competent judge \* stated at above five crore, and ninety four lacks ; while the charges of collection, at forty per cent. amount to two crore, thirty-seven lacks : Hence the landholder can only realise three crore, fifty-seven lacks, nearly.

EVERY Mawza, or village, requires a Putwary, (officer of accounts). The whole number of Mawzas in these provinces, amounts to one hundred and eight thousand ; of which some at present are waste, and contain several villages. The regulation is not so strictly complied with as to appoint an officer of accounts to every village ; one to three is probably the real proportion. One officer for messages, and such service, called a *gorait*, is also necessary to every Mawza : two rupees each month, is the smallest subsistence

\* Author of Remarks, &c.

subsistence that can be assigned to the gornat; and ~~four~~ rupees is a very moderate salary for each officer of accounts. At these rates, however, sixty thousand putwaris, and thrice that number of messengers, require a salary of ninety-three lacks and sixty thousand rupees.

BETWEEN the first collection at the villages, at the principal divisions of districts, other charges are incurred; without bringing these into account, new sums are required for pergunnah charges; or those expences incurred at larger districts. According to the institutions of Acber, the number of pergunnahs was upwards of nine hundred. In the present arrangement this division is not exactly followed; some pergunnahs being divided, and others consolidated; but the actual number is believed to be nearly the same.

FOR each of these pergunnahs ~~a~~<sup>a</sup> number of accountants, registers, secretaries, guards, and peons are required, and their present allowances, in salaries, fees, and perquisites, has on a moderate computation, been estimated at five hundred rupees per month. Nine hundred districts, at this monthly charge, require an annual established expenditure of fifty-four thousand rupees. If to these sums you add other incidental charges incurred between the landholder and tenant, two crore thirty-seven lacks for the expences of collection, will be fully accounted for.

AFTER



AFTER this heavy deduction, there remains, as we have stated, nearly three crores fifty-seven ~~lacs~~ to the landholder; but agreeably to the permanent settlement only one tenth part of this sum is left for his own income, the other nine constitute his affeement to Government. In this country, therefore, the Government, according to your ideas, will appear the proprietor rather than the Zemindar. The interest of the former being equally permanent, and far more substantial than that of the latter: When the zemindary is extensive, the landholder does not appropriate even the tenth part of the gross rents. In such a situation, he appears like a superintendant of a numerous train of subordinate collectors, for every one of whom he is responsible.

MANY of the properties in Bengal are small; on these a calculation has been made to admit of a larger share to the proprietor; because in such instances a tenth of the gross payments would have proved totally inadequate for his support. "The particular sanction of Government for such calculations was seldom necessary; because most of the small properties were held upon tenures which furnished their own standard for the settlement †."

SUCH

† Vide Remarks, &c.

SUCH is the stupendous and complex system adopted for collecting the revenue of India, without taking into account the number of civil servants appointed to this duty by the Company, who form a superior class of revenue officers, receiving individually far greater emoluments than any of the others already noticed.

THIS system to you must appear awkward and expensive, from the excessive number of agents employed; but here it is, perhaps, in a great measure unavoidable, from the extent of the country, the number of villages, and the small sums contributed by each. A single manufactory with you contributes more to Government, than perhaps a whole pergunnah in India. One large sea port may have its duties collected by a number of officers comparatively small, while in levying an equal sum here, you must maintain an establishment sufficient for ~~the~~ whole province.

THE want of activity among the native writers and accountants, tends also to increase their number. In some private families you will see three or four writers employed merely on family accounts, which in Europe the master of it would easily adjust with equal accuracy, by devoting only a few hours in the week.

BUT as often as natives are employed, you have apparent application to business, with little progress; bustle with little dispatch; and numerous agents without much execution.

## OF THE DISTRIBUTION OF PROPERTY IN LAND.

.....

*Chinfurah, March 1800.*

If large estates in the possession of individuals are pernicious to the general interest of agriculture, too small a distribution of land is still more injurious ; and Bengal has had the singular infelicity of suffering at once both these evils. One substantial improvement, therefore, is the dismemberment of large properties ; while in those instances regulations which encourage the subdivision of landed estates among heirs, according to the common laws of inheritance, are salutary in their operation.

THERE are over Bengal a vast number of subordinate proprietors, who are supposed to have had their origin in the hereditary nature of the different officers in the collection of revenue under the Zemindar.

mindar. In some parts these small properties have arisen from an extension of the right of occupancy from vague permanency to a hereditary and transferable interest. They are called *Talooks*, and all pay a fixed quit rent, for a portion of land heritable in the family, and transferable by the common rules of law ; though in some instances the right of alienation was not recognized.

THESE estates, originally small, soon were subdivided by the operation of the Hindoo and Mahomedan law relating to inheritance. The former divides property into equal shares among heirs of the same degree, but excludes females, who succeed only in failure of male heirs : The Mahomedan code assigns to several relations their specific portions as allotted by the Crown ; and divides the remainder of the inheritance in equal shares to all males of the same degree, and half their portion to females of the same degree <sup>of</sup> consanguinity §. Thus a vast number of properties were split into portions so small, that the Talookdars in some instances stand assessed in the revenue books only at a few pence. Yet these petty proprietors continue attached to their possessions, limiting their industry to a paltry spot, incapable of yielding them a subsistence, much less of supporting a genteel indolence, which many attempt, in imitation of their ancestors, on a divided patrimony.

§ Vide remarks on the agriculture, &c.

mony. The idle indigence of these small proprietors, exhibits agriculture in its worst state. Their poverty prevents every improvement; the property though cultivated to the utmost, is often inadequate to the support of a family.

FROM the unambitious, and indolent disposition of the natives, this state of property becomes peculiarly pernicious: Satisfied with the produce of his field, if it support life at any rate, he will neither apply to any other occupation, nor cultivate more land. If the property is let to a tenant, he is strained to the utmost to supply the wants of a necessitous landlord; and his own poverty acts as a bar to all spirited cultivation. The tenants of these small properties are comparatively wretched, and their farms in bad condition. Mr. Young gives a similar account of the state of property in some parts of France.

THIS state of landed property exhibits the great body of people in so depressed circumstances, that they can procure nothing but the mere necessaries of life. A wealthy peasantry, and well paid labourers, encourage agriculture, manufactures, and the arts, by the large demand for their consumption; while a whole country possessed by indigent proprietors, or still more wretched labourers, contributes nothing to general prosperity, and is an unprofitable population. The income left to all the proprietors after paying their assessments (nine tenths of the whole), has been stated at rupees 26,46,409; this sum distributed.

luted among more than 60,000 proprietors, leaves an income to each of thirty rupees, a sum insufficient to maintain the family of the poorest labourer.

THESE evils, by proceeding to extremity, correct themselves: the zemindar of a very large district paying 9-10ths of his whole income to the revenue, on any calamity must fall in arrear to government, and part of the overgrown zemindary is sold to discharge his debt; this portion falls probably into the possession of some smaller proprietor: on the other hand, if the property of a petty Talookdar is sold to defray his arrears of revenue, the probability is, that the possession will fall into the hands of a more considerable landholder. Hence in the lapse of time a nearer approach to equality of possession will be established: a perfect equality is unattainable, and probably would be disadvantageous.

IN Asia ~~the~~ great body of the people are in a state of extreme poverty and depression. This is the first observation which forces itself on every European when he beholds their condition. The intercourse of the British has had considerable effect in bettering their circumstances. After all the avidity and irregularities which have been alleged against our Government, its subjects are the most comfortable and easy in their circumstances of any in India. The farther operation of that government will produce in time effects still more decidedly favourable to the people.

MUCH

MUCH room still is left for adding to their comfort. In the greater articles of lodging, food, and cloathing, their situation is far inferior to that of any nation in Europe. Their buildings are light and paltry, which no allowance for their manners will palliate. An Hindoo in easy circumstances accommodates himself, it is true, only with a hut; but this hut is clean, neat, and warm: the great body of people creep into wretched hovels, incapable of shelter or protection, and of materials so wretched as to be unfit for fuel, and it must do so, not from manners, but from poverty.

THE same thing is observable in dress: the climate does not require the thick and substantial cloathing of Europeans; but among individuals, whose circumstances admit of choice, there is some variety, much cleanliness, and elegance of dress. When this is contrasted with the miserable rags or nakedness of ninety-nine in one hundred of the people, it is not to be ascribed to the simplicity of Hindoo manners, but to the extremity of their indigence. In their food, flesh is excluded from the diet of the greater number, and fermented liquor from all; yet that circumstance will not account for the far greater part eating millet, pulse, and bad grain, instead of white corn: nor will any circumstance of manners, or religious prejudice, account for the small portion of salt, spice, and ghee used in the general run of meals, while those of the opulent are so fully supplied with these ingredients. It is therefore



therefore to be concluded that the Asiatics are poor; and that they are themselves conscious of that poverty; and would willingly improve their condition, though incapable of that persevering industry, or that energy of exertion which characterises Europeans.

It has been urged, that from the low price of provisions, the wages of a native labourer is equally competent to his subsistence, as those of a Briton. This is scarcely admissible. In England the price of a pound of meat is 5d. and of bread 2d. which makes about one third of a labourer's hire. In Bengal the price of a labourer's wages is one ana per day; that of coarse rice is the same; but meat and bread is a much more adequate meal than coarse rice, even to a Hindoo.

THE average earning of a family in India has been computed at 10 rupees per month; this, which is probably a just estimate, can barely support a family in the lowest form of existence†. Whether the computation be accurate or not, the result of it is a correct representation of the condition of the great body of the people in this country. The intercourse of Europeans with a people so circumstanced has tended to animate their industry, to direct it to new objects, and to procure labour an additional reward by increasing the demand for it.

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THE

† Vide Remarks, &c. p. 65.

THE first commencement of our influence was necessarily attended with turbulence and confusion ; the existence of a regular British government is but a recent circumstance ; yet in the course of a few years compleat security has been afforded to all its dependants ; many new manufactures have been established ; many more have been extended, to answer the demands of a larger exportation. We have therefore conferred upon our Asiatic subjects an increase of security, of industry, and of produce, and of consequence greater means of enjoyment, as well as more ample opportunity for acquiring the knowledge of truth, and the practice of virtue.

THE

## THE PROFITS OF HUSBANDRY IN BENGAL.

.....

*Chinfurab,* 1800.

A PRINTED treatise, entitled Remarks on the Agriculture and Commerce of Bengal \*, by a civil servant of the Company, may be regarded as the only work on this subject. When treating of the profits of husbandry, the author of these remarks distinguishes the cultivators into three classes ; first, those applying the labour they give, to husbandry to land solely on their account ; second, those tenants who monopolize land, to relet it to the actual cultivator at an advanced rent ; and thirdly, those peasants who superintend the culture of their lands performed by hired servants or workmen.

PERHAPS

\* This treatise has not yet been published.

• . PERHAPS the greater part of the lands tenanted, are possessed by peasants who thus hire labour; many being restrained by prejudice from personal labour; many also are contented with superintending the management of labour called in aid of their own. As, however, these servants and labourers also use land on their own account, the peasants in respect to number, may be truly described as labouring unassisted on the lands they use.

“ A cultivator employing servants, entertains one for every plough, paying monthly wages, which on an average do not exceed one rupee per mensem. In a cheap district we have found the monthly wages as low as eight anas. But the task, on a medium of a biggah a day, is completed by noon. The cattle are then left to the herdsman's care, and the ploughman follows other occupations the rest of the day, mostly the cultivation of some lands on his own account; and this he generally tenants at half produce from his employer. The quantity of land commonly used by the ploughman, is ascertained by the usage of some districts, which authorises a specific quantity to be underlet to the ploughman, equal to three biggahs.”

THIS portion of land, cultivated solely by the personal labour of the ploughman, cannot pay him more than seven rupees per annum, which added to his monthly allowance, gives a subsistence of nineteen rupees, or about two pounds seven shillings of our money.

money. This is the wages of a very large portion of agricultural labourers.

“ IF the herd be sufficient to employ one person, a servant is entertained ; and he receives in money, food, and clothing, to the value of one rupee and a half per mensem. The same herdsman, however, generally tends the cattle of several peasants, receiving per head, a monthly allowance equal to half an ana. One herdsman can tend fifty oxen or cows, his subsistence will thus amount to nearly the same sum as the allowance of the last class, or ploughmen.

WHEN several ploughs are kept, the peasant generally has a pair of oxen particularly assigned to the implement which supplies the place of a harrow : for this is supposed to require stronger cattle than are sufficient for the plough. A plough complete costs less than a rupee : the price of a harrow is still more inconsiderable. The cattle employed in either, are of the smallest kind, and will not average more than four or five rupees a head. The medium rule of hire for a day's labour of the plough or harrow is two anas, or nearly fourpence sterling.

“ FOR a hand-weeding, the labourers are very generally paid in grain instead of money : the usual daily allowance is from two to three seer. The labourers bring their own hoes, which are small *spuds*, and their cost is very trifling. Twenty labourers  
 . . . may

may weed a biggah in a day ; which is at the rate of sixty to each acre.

“ FOR transplanting, the allowance and labour performed are nearly the same. No tool is required for transplanting rice, the whole operation being performed by the hand ; but for other cultures where a tool is requisite in planting, an implement resembling a hoe, on a long handle ; or one like a chissel, also on a long handle, is employed.

“ FOR hand-hoeing, the large hoe which in Bengal serves the purpose of a spade, is employed. It is wide and curved, and set on the handle at an acute angle, which compels the labourer to stoop low to his work. The same tool serves to break up old lays, previous to dressing them with the plough, and for other purposes for which a spade is employed in Europe. The pay for digging, though most severe, is on the same allowance with that of other country labour, namely, between two and three seer per day.

“ REAPING is generally performed as piece work, the reapers being hired at a sheaf in sixteen ; or, if they also carry in the harvest, at a sheaf in eight : but the whole expence of gathering the harvest may be paid with one measure of grain in six, which provides for the labour of reaping, carrying, winnowing, measuring, and storing the crop. The thrashing is

is not included, for corn is not thrashed, but trodden out by the cattle of the farm."

HUSKING of rice, though sometimes the business of the corn merchant, is frequently performed by the peasants on the farm at leisure times. It is executed with a wooden pestle and mortar, or under a beater worked by a pedal of a simple construction. It is husked dry for home consumption; but scalded for exportation, as the method best calculated for preservation. The expence of fuel is nearly equal to the economy of labour, the allowance for husking rice is the same in both processes; and is generally contrasted for at five-eighths of clean rice to be returned for the original quantity given out: the surplus, with the chaff, pays for the labour.

SUCH are the wages of the various kinds of labour, on a grain farm; they are nearly uniform, and certainly ~~very~~ moderate. It appears, however, that a peasant cultivating on half produce, is still worse paid for his labour than the workman hired by the day. Some small deductions are made from the crop before partition such as for measurement, religious appropriations, &c.; others for some of the cultivator's small expences: as these nearly balance each other, he may be regarded as receiving exactly one half of the produce to reward his labour,

THE produce of a biggah of rice, being a tolerable fair crop, may be reckoned at ten maunds :

	m.	s.	ch.
	10	0	0
Deduct the proprietor's share with seed			
● advanced by him, - - -	5	26	10
Labour of reaping and harvesting, - - -	1	26	10
Twenty days weeding at $2\frac{1}{2}$ fees, - - -	1	10	0
Husking, with wastage,, - - -	0	21	4
	<hr/>		
		9	4
	<hr/>		
	0 35 16		

THIRTY-FIVE fees sixteen chittacks of rice, is worth at an average, not more than eleven anas, which will not defray the labour of ploughing and harrowing, even at the small allowance of two anas per diem. Here no allowance is afforded for the tear and wear of implements, nor for the interest of money borrowed for stock. It follows therefore that the peasant cultivating for half produce, is not so well rewarded for his labour as workmen hired by the day or month. In rich districts, where the produce is greater, while the seed and labour are the same, he may be paid; but of these districts there are much fewer than of those that yield a produce less than that above stated; and in all such cultivation for half produce is impracticable, because it will not afford the simplest necessities.



" IN the far greater part of the lands, cultivation for half produce being impossible, the rent together with all payments to the landholder and his officers, is only one fourth of the gross produce. Calculating two crops in the year, one of rice, the other of millet and pulse; their value opposed to the rent and expences of culture, seems to yield still a smaller subsistence to the Ryut than either the day-labourer or cultivator for half produce. The plough, with the necessary complement of three yoke of cattle, and wages of a ploughman, costs annually twenty-two rupees and a half; this divided equally among fifteen biggahs of land, which it is capable of cultivating, gives an annual charge for ploughing each biggah, of one rupee and a half,

" The annual profit and charges of a biggah of this land, estimating the two crops at the usual average, will be as follows; viz.

	Rup.	
Seven maunds of rice at	3 4½	
Three one half maunds of pulse, 2	3	
	<hr/>	
	5 7½	
		Rup.
Proportion of the plough -	-	1 8
One fourth of produce as rent, -	-	1 6
Seed, reaping, and harvesting, -	-	1 6
Two weedings of forty days labour, -	-	1 4
		<hr/>
		5 8

" HERE .

“ HERE there appears a loss against the cultivator of one ana and a half for each biggah in his possession ; the labour, however, for which we have calculated him to pay, is furnished chiefly by his own family, who also apply their leisure to other occupations, and thus earn for themselves and their master that scanty subsistence which they enjoy. The lands underlet to his ploughmen also contribute a profit to balance in part this loss.

“ IN fact, says the author of the remarks, it is not upon the cultivation that the peasant depends for profit, or even for comfortable maintenance. In grazing districts it is the dairy ; in others, it is the culture of some more valuable produce which aids the corn husbandry. In grazing districts, the occupying of arable land is necessary to entitle the Ryot to pasture in the forests and downs a proportionate herd of cattle. And the culture of corn, though not equally profitable, serves to alleviate the risk of other branches, which seem precarious in proportion to the greatness of profit. On the failure of his mulberry, or sugar cane, the peasant, had he no corn, must suffer the extremity of want ; but raising in corn and grain, a sufficiency for mere subsistence, he can wait the supply of his other wants, from the success of other crops ; or make a reserve from the successful year to meet the difficulties of another less fortunate.

“ THE profits of live stock are less precarious ; they consist of the increase of kine, and the milk of buffaloes. Kine are usually fed near home, on reserved pastures, or on the waste lands of the villages. Buffaloes needing richer pasture, and thriving on rank vegetation, do not find sufficient pasture in populous districts. The herds of this cattle are most numerous in the northern and western districts, where in the rainy season they find pasturage on the downs, and in dry weather on the forest lands, which are mostly inundated during the rains. A proportion of the buffaloes travel, in the dry season, into the forests of the countries which border on Bengal.

“ BLACK cattle are grazed at a very small expence. It does not exceed eight anas a head for buffaloes, and four anas annually for cows ; and in the grazing districts of Bengal, the whole annual expence incident to live stock does not rise so high.

“ THE profits of the dairy arise from the sale of milk in various forms, and of clarified butter. As this is a produce which bears transport to a different market, we calculate the profit as if the whole milk underwent this preparation.

“ THE buffalo can daily supply the dairy with two or three seer of milk. Upon an estimate of milch cows, in the proportion of two thirds of the whole herd, throughout the year, (in which allowance is  
made

made for the suckling of calves), the produce is nearly fifteen maund of milk, for each cow of the herd.

“ THE dairy man will contract without wages, to deliver two seer and a half of clarified butter for a maund of milk. At this rate the proprietor should receive thirty-seven seer and an half of butter for fifteen maund of milk, and may dispose of it for seven rupees and an half, from which a deduction must be made for transport from the dairy to the market; for these cattle being usually grazed in remote countries, the temporary hut which serves for a dairy is far from the market. This, however, with the expences estimated at seven anas per head, will hardly reduce the annual profit much below seven rupees for each buffalo cow, or thirty per cent. on the capital, valuing the buffalo on an average at twenty rupees, and supposing that the increase of stock fully compensates the loss by mortality and accidents. We make no account of the few male calves reared for sacrifices, nor of those reared for labour; buffaloes in Bengal Proper, being rarely employed for burden, are for the labours of husbandry. The profits of the common cow, by the increase of stock, are nearly in the same proportion to the capital which purchased them: they certainly amount to thirty per cent.

“ THE profits of live stock would be still greater, did the consumption of animal food take off barren cows and oxen which had passed their prime. This indeed can never happen where the Hindoos constitute the great mass of population ; but most tribes of Hindoos have no objection to the use of other animal food. At their entertainments animal food is generally introduced : But meat, (mutton and goats flesh), being more than double the price of vegetable food, it could not be afforded as a common diet upon the usual earnings of labour. Whether this circumstance has much influence, or whether abstinence from animal food be not rather ascribable to moral causes, may be questioned. Probably both have influence, though the latter has the greatest. From whatever cause it be, the consumption of animal food is not so considerable as to render the stock of sheep a general object of attention.

THEIR wool supplies the internal consumption of blankets, but is too coarse, and produces too small a price to afford any considerable profit on this stock. The valuable articles of sugar, tobacco, silk, opium, cotton, and indigo are the principal dependence of the cultivator for the supply of conveniences, and for the accession of wealth. They derive a farther importance as the objects of external commerce, and they have therefore been treated of separately, as minutely as information could be procured.

## PRESENT STATE OF THE LOWER DOOAB.

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*Kinouge, Dec. 1798.*

IN passing from Allahabad by Caunpore to this place, a distance of near two hundred miles, I have had opportunity of remarking the present state of the lower Dooab, and of the adjacent province of Oude. The buildings most worthy of notice are the remains of the ancient towns of Cuarrah and Mannikpore. About two centuries ago these places were the residence of the government of those provinces which still bear their name. When Acber changed the residence of the Soubahdar from Currah to Allahabad, the whole officers of his household, whose establishment and equipage had conferred an air of magnificence upon the former town, necessarily changed their abode.

THIS powerful cause soon proved the ruin of Currah; but independent of its operation, the ravages  
of

of time, in this country, must speedily have produced its decline. The incroachments of the Ganges, and even of small rivers, soon effect the destruction of the strongest buildings; since the immense quantity of rain, which in this country falls in the space of a few hours, gives them a degree of force and rapidity which defies all resistance. The rapid growth of trees proves also a very powerful source of decay to Indian buildings. The seeds of the peepul tree, (*Ficus indica*), as often as they fall upon an old edifice spring up into trees with great rapidity; the roots you may observe spreading along the front of a wall in search of nourishment, for twenty feet; wherever these find an interstice they penetrate, while their enlargement gradually loosens and shatters the most sufficient buildings. Thus a town in India suffers as much in the course of fifty years, as in Europe it would do in two centuries. Hence the ruins of Kinouge and Gour, are but barely perceptible, while cities of equal antiquity are in your quarter of the world still perfectly entire. The decay of Currah and Mannikpore, it is said, have been greatly hastened by the late Nawab of Oude Azoph Dowlah, who ordered several of the most elegant buildings to be destroyed for the freestone of which they were built, that he might be supplied with materials for his new buildings at Lucknow.

THE people who inhabit these venerable ruins, are lodged in wretched huts suited to their depressed circumstances, and sadly expressive of the calamitous events.

events they experienced during the dissolution of the Mogul Empire. Their melancholy situation excited a more than common interest, because it is unavoidably contrasted in the mind with their former grandeur and magnificence. Our Moonshee, who is a great adept in the traditional history of India, assures us, that the inhabitants of both cities are in general descended from ancient and noble families, who have been celebrated for producing several literary characters of considerable note. The inhabitants of Mannikpore lay claim to sanctity as well as learning; they are said to be descendants of the Seyds of Curdesi, a city of Persia. Of this sanctity and learning you however will form no elevated conception, when you are told that the present Rajah of the district is the representative of an ancient family who received the government of it from a Fakeer, who had himself obtained his investiture from the hands of the Deity: here then is a prince who possesses his rank, still more literally than was supposed of European monarchs, *jure divino*.

THE whole face of the country in the lower Dooab, as well as the appearance of the ruined towns, wears a melancholy gloom. Remains of its former population and fertility are continually meeting the eye of the traveller, which he contrasts with the extensive wastes or jungles that now occupy so great a part of the surface. Large tanks, topes, and serais, are seen at small distances upon the roads. In the formation of these the religious maxims of the natives.



tives are strictly connected with utility. To dig a tank, to plant a tope, or to build a serai, every Hindoo exerts himself as far as his circumstances will permit, in the full conviction that he can in no other way so certainly promote the good of his fellow creatures, or so effectually work out his own salvation. Without tanks, the cattle during the dry season would perish; and without wells the traveller could not subsist; nor agriculture be carried on. The number of both that is necessary implies so great labour and expence, that government has frequently lent its assistance to the inhabitants: and the historian of his own time, Golam Hossain Khan, seriously urges it as an objection against the British, that neither individuals nor government have interested themselves in these works of necessity and mercy. The former, he complains, are prevented from colonizing, and therefore never can regard India as their home. The only principle that can actuate them, is the most expeditious method of accumulating a fortune, with which they may retire from the country; the interests of which are considered by them as remote as its situation. From the very nature of the case, there must be some foundation for the complaint of this author; and our successors in India will have cause to regret that still fewer of these necessary erections remain than there is at present. Since therefore individuals cannot feel an affectionate interest for the welfare of a country which they are forbid to regard as their own; it is to be hoped that government will do away the grounds of this

this

this complaint. However fluctuating the situation of individuals may be in India, the interest of government is permanent in the country.

THE millet is now ripe, and affords an excellent provender for our camels, elephants, and bullocks. I had frequently regretted that so much of the ground was occupied by a small eared pitiful grain, but the vast quantity of straw about ten feet long, and an inch in circumference, makes a fair compensation for the meanness of the ear. The number of cattle necessary for the camp equipage of an Indian army is immense, and without a supply of this provender which ripens exactly at the commencement of the cold season, it would be impossible for any considerable body of troops to keep the field. Our army, when joined by the different detachments, will consist of about eighteen thousand infantry and cavalry, and probably of a still greater number of the Nawab's troops. These will be attended by more than twenty thousand cattle of different kinds, and camp followers to five times that amount.

IN our present state we cover a line of march the length of from six to eight miles. The marching of a native army through a country either in a hostile or amicable manner, uniformly commits much devastation: European discipline, and the attention of our commanding officer, has converted this scourge of India to an advantage; for wherever our troops penetrate, a market is thus provided at the peasants door.

door for almost every article he can spare ; while his person and property are more secure than on ordinary occasions : for it is seldom the camp followers are allowed to incroach even upon a corner of his corn field.

INSTEAD of the ordinary relief of the troops at the different stations, we have learned that we have marched thus far on the commencement of a fresh campaign ; and that our battalions are to oppose the enterprises of Zemana Shah, the Persian King, and the Mahrattas ; and to co-operate as covering army to the troops at Seringapatam : a measure at once judicious and necessary. Zemana Shah and his ancestors have for many years been the scourge and terror of Hindostan : even by European troops he has been dreaded as the Porus of modern times. I had therefore some curiosity to remark the countenance of our Scottish regiment, the 78th, when they were informed of their destination to oppose him. It was gratifying to observe that they marched not only with perfect willingness, but alacrity to the music of the Bag-pipe over those very plains where the troops of Alexander mutinied in circumstances not dissimilar.

THE rapidity of our movements will seldom admit of my visiting the interior of the country at present ; you may however depend on having an account of the state of those parts bordering on our route regularly sent you. Report says, that our destination is the foot of Tannassie, which is an hundred miles  
above

above Delhi, and consequently much higher than any European army ever penetrated into India.

EVER since we left Caunpore, the country is not only generally cultivated, but displays at this season a great variety of rich crops. The barley is sufficiently high to cover the mold, while bajerrow and fugar that intervene, are between eight and ten feet in length, and so thick as to exclude the sun. Such places as are not covered with grain are either planted with tamarind trees, or large mango topes, forming a cool shade to the cattle under their branches.

ON looking around, therefore, the whole country seems to be overspread by large forest trees, except a small circumference immediately in your vicinity. Some extensive sandy deserts must lie to the west of Delhi, otherwise the severity of the hot winds in this latitude could not be accounted for. Were the dust upon the surface uniformly covered by trees, or by a crop of grain, it could not acquire that excessive heat which it communicates to the atmosphere during the months of April and May. This is not matter of conjecture; but it is by observation discovered that a large tract of barren sand reaches from the mouth of the Indus to the west border of the province of Delhi.

THE topes here are as serviceable to travellers as to cattle: no person who has not experienced the fatigues of a journey in this country can conceive the

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lassitude and thirst which the intense heat occasions. Even in the winter season, the morning only is cool ; towards mid-day the traveller retires to rest in a tope, where he probably finds a well to quench his thirst, and to refresh his weary cattle. So sensible are the natives of the benefit, that you frequently meet some of them waiting at the well ready with a pitcher and a rope to draw water for strangers ; many especially of the females, are in this respect as hospitable as Rebecca was to Isaac. Some, I trust, profit by this kindness ; for benevolence still possesses attractions as strongly as in the days of that good patriarch.

THE serai in Hindostan is more suited to the rich than poor traveller, since even the small pittance that is there demanded, far exceeds the inclination or abilities of an Hindoo. If he has a little rice in his girdle, he feels little concern at the want of the luxury of an house ; for of the many thousands who now fill our camp, not a tenth part sleep under any kind of roof. They kindle fires of any rubbish that the place may afford, and after wrapping themselves in a coarse blanket, trust to the fatigues of the day for sound and refreshing sleep.

SHOULD a great man with his retinue pass along, the serai is wholly occupied by him for the time ; he sends before to take possession of it, when he gives security to the Cutwal or Zemindar for the orderly behaviour of his retinue ; a precaution probably very necessary to the peace and property of the village.

lage. The retinues of a feudal lord were never more licentious in Europe, than the idle banditti that at this day accompany an Indian chief on his journey. It is common to have the victuals dressed in the serai, to have water provided for this purpose, and for washing the strangers feet, which is here deemed a mark of hospitality and politeness, as it was by the inhabitants of Judea. The loose sandals, and the want of stockings, admit much dust, while the feet suffer by the friction of so loose a shoe; much greater comfort and relief is derived from bathing the feet than a European would suppose.

OF THE ZEMINDARY OF ALMASS, AND HIS CONDUCT TO  
THE RYOTS.

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*Camp near Kinouge, Dec. 9, 1798.*

EVER since we left Caunpore the country has been uncommonly rich and well cultivated. The sugar cane and millet crops are nearly ripe ; and their appearance makes a fine contrast with the barley which begins to cover the soil. A crop as rich in appearance would lodge and rot in any part of Britain ; but there vegetation is encouraged by frequent rain, whereas the barley and wheat here will not receive a single shower till they are trode out and secured. Almass Ali Khan Bahender is collector of the revenue throughout the whole of the Doab, and on the side of Oude from Mirzapore as far as the fort of Tannaffir, a distance of more than four hundred miles.

He is now about eighty years of age, and from the length of time he has managed this extensive tract, probably the largest in India, he has amassed a large fortune, amounting, by report, to several millions. He is in fact too powerful to be called to account for his management, or to remain in the condition of a subject. Had not the late Nabobs of Oude been supported by the British Government, it is more than probable that they would long since have fallen a sacrifice to the treachery or ambition of this powerful chieftain, who makes his progress through his district collecting the rents with an army much more numerous and better disciplined than that under the immediate command of the Vizier. The character of this man is described as avaritious in the extreme: it is said that as soon as he finds the children and women of a family earn any thing beyond their necessary support, that he uniformly makes fresh exactions on the Ryut. If a peasant can support life upon half a rupee per month, he will soon find himself reduced by the exactions of the eunuch to that sum.

THESE representations are probably exaggerated, since it is allowed by all, that the large zemindary under his direction is the best cultivated, and the most populous of all the Nawab's dominions. The experience of Almas must long since have taught him that it is not by the utmost rigor of exaction, or by grinding the faces of the poor, that the greatest rent can be drawn from any quantity of land. Pro-  
tection,



tection, seasonable indulgence, and security, are all necessary to a spirited cultivation in every country; and by the effects of these it appears that they are afforded to the Ryot here, as perfectly as in any district I have yet seen in India.

THE same attention is here paid to the planting of topes; the trees in all of them are not only numerous, but they are placed with much religious exactness, that they meet your eye in straight lines, from whatever direction you view them. In one respect the raising of mango groves is conducted with greater care than I have elsewhere noticed: all the young trees are surrounded, during the first and second year, with a plentiful covering of straw, which tied at the upper end spreads below to afford room for the plant, like the thatch sheaf put with you over a bee-hive to defend it from the cold.

YESTERDAY Almas joined us at Mindy Ghand, near the famous city of Kinouge, which before Delhi, is said to have been the capital of India. Our establishment of brinjaries already amounts to fifteen thousand. What will be their numbers when all are assembled, I dare not offer to conjecture; yet with all these attendants, besides our elephants, camels, and draught cattle, our march proceeds with much regularity. The elephant's sagacity can hardly be regarded as inferior to that of his guide; for he not only lies down to receive his rider, but he lifts his burden, piece-meal, with his proboscis, and hands it

to a person who adjusts it on his back. He breaks off the branches of trees not only when necessary for his food, but when any large branch interferes with the line of march; he bends it with the trunk, till he can put his foot upon it. when it is instantly torn down. In a crowd, the people around him seldom receive any hurt, for he carefully removes with his trunk those that are upon his road.

WE this day passed over the ruins of two towns formerly of importance; I could not learn their names; they are probably the suburbs of the ancient city of Kinouge, which lies near our camp, towards the interior part of the country. The fields, during this day's march, were equally rich and fertile with any we have yet seen. Our encampment was yesterday upon the bank of a small limpid river, resembling those in your country in the purity of its water. This stream is sacred; and, according to the faith of many, has greater efficacy in washing away moral defilement than even the water of the Ganges itself. A person in Ceylon drinks daily of this river, though at the distance of perhaps three thousand miles, and at the expence of 5000 rupees per month. It is carried like the water of Hurdwar, in baulies on the shoulder.

I went lately to view Minday-Ghaut, a residence of Almas. The place consists of two Bazars, protected by two mud forts, each about a mile in circumference. The bungalow and gardens of the eunuch

much are of moderate extent and mean appearance. His ordinary retinue, however, consists of about three hundred horse, whose stables are adjoining to the bazars. European vegetables are cultivated here by a manufacturer of indigo, who carries on the business on a larger scale than any I have yet met with. Last year he manufactured and sent to Europe eight hundred maunds, which at the ordinary estimate per acre, gives him a cultivation of no less than 1333 acres of land. The vats are excavations dug in the ground, and neatly lined with brick and lime. The workmen and their utensils are surrounded by a small mud fort, to protect them from the incursions of thieves and banditti. The boldness and numbers of these plunderers is hardly credible, in the upper part of India. Our camp followers steal from each other, or are plundered by the robbers who dash into the camp by night. As often as they are in danger of being detected, they accompany the theft by murder. We had this day the misfortune to have one of the horses of the European cavalry drop into a well; the animal was drawn up unhurt; but the persons employed in this work found three men at the bottom of the well who had been murdered the preceding night. Every cultivated field requires so many of these wells for irrigation, that it is surprising accidents of this nature do not oftener happen.

. *Dec. 10.*—I this day travelled over the ruins of Kinouge, the most extensive perhaps in the world. For many miles before you enter the present town, you travel through jungles interspersed with small fields of tobacco, that consist of brick-dust and mortar. To remove all doubt that the rubbish consists of the remains of a town, walls and broken gateways here and there raise their heads in defiance of time. The greatest part of the standing buildings are ruinous, uninhabited, rent, and tottering to decay. The few poor people now in the place accommodate themselves under mud huts buttressed up against the old walls. Not a great many buildings are intire; whole mountains of unshapely ruins meet your eye in every direction; upon a space of ground much larger than the scite of London.

AMIDST these heaps of desolation, there are spots here and there under tobacco; which is almost the only European plant of universal request in Hindostan. The ruins of such buildings are with great difficulty converted into arable land; for brick-dust does not assimilate with the soil till after many centuries; the action of fire having changed its nature. The brick in this country seems of an inferior kind; though it is perhaps the oldest manufacture in the world, and is baked by being interlaid with beds of straw, which is set fire to. The complaint of the Israelites that they were compelled to furnish their tale of bricks without being allowed straw, seems here perfectly relevant; because it does not

appear that the Orientals ever had any other method of preparing them. One species of brick in use for the principal buildings of Kinouge, is very rare, of a large size, and half vitrified. The colour of this sort is slate blue : it is more coarse than the common, but has proved far more durable.

THE breed of cattle seems to diminish in size gradually as you approach the upper country ; as however we are still far from the mountains, it is not easy to account for their small size here. Bullocks, horses, asses, and buffaloes are not above half the weight that they are in many parts of the lower provinces. Here is however a much greater variety of working cattle than Europe can boast of ; the buffalo, the camel, and the elephant are little known there, while the ass and the cow are here often used for riding as well as the horses, yet the former is seldom much larger than a good English sheep.

OF THE STATE OF THE UPPER DUAB, AND THE VICINITY  
OF DELHI.

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*Anopshcer, Dec. 26, 1798.*

OUR route to this, the highest station of the Company's troops upon the Ganges, has been through Futtighur, Ferruckabad, Sahebgunge, Mow-Shum-sabad, Rhoodol, Cumbul, Doriahgunge, and a variety of other towns, or rather villages; for the country becomes gradually less populous as you recede from the Company's provinces. This part of our route has frequently been intersected by detached shreds of territory belonging alternately to the Nawab Vizier of Oude, and the Mahratta states, and displays a worse species of human association than any I have yet witnessed; for I will not call that gloom of desolation which gradually thickens as you approach the vicinity of Delhi, by the name of government.

Wf

WE arrived at Anopsheer this morning, and should no enemy appear, it is probable that this will prove the termination of our march upwards. Anopsheer has the appearance of having formerly been a place of some strength and consideration. On the south, the town is defended by a large brick fort ; which must have been almost impregnable to a Mogul army, even although it does not possess any place that could station a battery of cannon : like Mongheer, Chunar, and Allahabad, it has been erected chiefly against cavalry ; and is intended to be defended by bows and arrows. The loop holes for these are numerous in every part of the wall.

FROM this citadel there is a commanding view of the whole country, and of the Ganges meandering through it for many miles. That river is at this season reduced to a small breadth ; its stream is as pure and limpid as your rivers in Britain. The west bank rises perpendicular about thirty feet, and on that side the country is not overflowed ; while on the opposite side, the slope from the bank is almost imperceptible, and the fields bear the marks of being inundated for several miles. On this account the territory of Rohilcund is naturally made more fertile than this part of the Dooab which lies opposite.

THE town of Anopsheer has on several occasions been the station of the Company's troops ; and like the other military stations, the vicinity has benefited much by the circulation of pay. The fields to the eastward

eastward are well cultivated; and what I have not yet often seen, they are tolerably fenced. The strong jungle grass is plaited into webs of a sort of basket-work, and these, placed upon their edge on the sides of the field, protect the grain from almost every kind of cattle except the wild-hog. These animals are here numerous, as are deer, and game of all kinds. Since the conquest of Rohilcund in 1774, that fine country has rapidly degenerated into a waste, under the deleterious politics of the ministers of Oude. The natives are a tall, handsome race of people; and when compared with the other inhabitants, are white, and well featured. They still carry about in triumph some couches and palankeens of European officers that were killed by their army in the fatal action of 1774, by which we purchased a victory at a greater expence of European lives than was ever suffered by the same number of troops in India.

THE country towards Delhi, on the north and west, displays a naked sterility which is seldom interrupted by the intervention either of trees or cultivation. The forts and great cities in the late convulsions of the empire had most frequently the misfortune to attract the violence of depredators. Delhi, and its fertile plains, are said to have been plundered by almost every victorious faction; and the present dreary aspect of that capital and its suburbs, affords a melancholy proof of the truth of this part of its history. The town of Anopsheer is contained within a strong mud wall, and therefore is of no great extent.



tent, but of great population. It contains a very unseemly medley of brick and mud buildings; the former from the want of proper cement appear very insufficient. There is at the north end of it a Mahal of some antiquity, and considerable size. It is a large mass without either form or dimensions, and will therefore admit of no description. The surrounding wall of this town is in some parts twenty and thirty feet thick, and of course it could hold out for some time not only against cavalry, but even a train of artillery. It is customary for the zemindar of a village, when the rent is demanded of him, to refuse payment, and betake himself and his effects to the fort. Here he stands out against all demands till reduced by a military force. The government, on its part, adheres to no contract or agreement that may have been entered into with the ryuts; but in a year of supposed plenty, it exacts perhaps twice the quantity: Indeed, at every season it is not what rent the tenant has *stipulated*, but what he is supposed *able* to pay, that is exacted from him. This palpable iniquity of government naturally provokes resistance; and a zemindar whose wrongs have driven him upon his defence is, according to the language of the country, said to be *refactory*. This phrase, like the malignancy of our old republicans, is of such happy ambiguity and vast comprehension, that it implies every sort of guilt; and is deemed punishable by massacre, plunder, burning, or any kind of military execution.

WHILE government is thus unjust in its exactions, it performs hardly any of the duties due to the allegiance of its subjects ; for here there are no courts of justice, and no protection given against those plundering banditti who infest the country. For his protection and personal security against these, every inhabitant must trust to his individual arm ; or to the mud forts which defend each village against the enemy, or against government, which is in fact the greatest enemy the wretched peasantry have to fear. The ryuts, driven to despair, are forced to take up robbery for a subsistence ; and when once accustomed to this wandering and irregular life, it becomes ever after impossible to reclaim them to industry, or to any sense of moral duty. We had yesterday a melancholy example of the daring profligacy of which they are capable : An officer who rode out only a mile beyond the piquets, was attacked by a party of five horsemen ; in the midst of a friendly conversation, one stabbed him in the breast with a spear, which brought him to the ground ; then the others robbed him of his watch, his horse and every article of his clothing. In this naked state he arrived at the piquet, covered with blood ; and had he not been able to walk thus far, he must have fared worse than the man who “ between Jerusalem and Jericho fell among thieves,” since here there is not one “ good Samaritan ” to pity the unfortunate.

Dowdal Row Scindiah, under whose jurisdiction this country is, has been unable by any means he

has

has devised, to establish regularity, or afford protection to the peasantry. For this end every effort proved abortive, even in days of the plenitude of the Imperial power; since one hundred thousand of this very people (Mewatti) were massacred at one time, and yet the district still continued to be infested with marauders. Lately, when six were capitally punished for this offence by Scindiah, a straggling party entered Delhi by night, and inflicted the same punishment on an equal number of his troops that lay within the city.

AFTER about ten days rainy weather we have a return of the north-west wind, with a clear sky; the mountains to the north east appear unusually plain. Their distance is called two hundred miles, and the nearer ridges are here entirely unseen. Their appearance is exactly that of snowy clouds towering to an immense height in the skies. It would seem that Europeans had not sufficiently ascertained the height of the Thibetian mountains: They are situated in the center of the largest continent in the world, and are probably the highest mountains upon its surface. Teneriffe, which I have seen, and which has the reputation of being the highest land on the old continent, would not be at all visible at the distance of these mountains, which even here seem to soar above the clouds. They are eternally covered with snow; and when the wind blows from their direction, the weather, to our feelings, is much colder than in Britain. Fluxes and agues are the prevailing disorders which it brings on.

on. From the heat of 80 down to 30, is here the range of the thermometer in the same day, which is probably greater than in any other part of the world.

WE this day left our ground at Anopsheer for Lucknow, and Miah Almasi marched along with us. Though he is accompanied only by a few battalions, the confusion among his followers is beyond all description. I have been viewing his heavy baggage pass over a river by two bridges. The confused noise of men, sheep, goats, bullocks, elephants, and horses, who all attempt to pass at the same time, resembles the uproar of fiends broke loose from their infernal mansions. Whatever blunders their drivers commit are punished upon the poor cattle, whose backs resound with the blows of their heavy cudgels, and the same discipline exercised on the soldiers atones for the faults of their commanders. *Quicquid delirant reges plectuntur Achivi.*

WE are now entered upon the territory of the Rohillas, formerly called Catheir. According to Mr Hamilton, the historian of this people, the name of Rohilcund is but of recent application to this country, and was given it by the conquerors of that tribe. The Rohillas themselves are, he asserts, the great cause of the ruin of the country which bears their name; it was parcelled out among their chiefs, who had afterwards but a feeble connection with each other, while their dependence on Haffey Rhinat,

their prince, was more nominal than real. Hence their frequent wars, and their oppressive conduct, which gradually wore out the native Hindoos. The Mahrattas had invaded the Rohilla country at the time that they required the aid of the Nabob's troops for their expulsion. The sum stipulated for this service was never paid, and the Nabob to enforce it, solicited the Company's assistance, which effected the payment of the sum, but fortunately enabled that sanguinary tyrant afterwards to complete the destruction of the Rohilla government, and nearly to exterminate the people.

REMARKS

REMARKS ON THE STATE OF ROHILCUND, AND THE  
GOVERNMENT OF OUDE.

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*Barcilly, Feb. 2, 1799.*

OUR sudden march across the Ganges towards Lucknow, was occasioned by the escape of Vizier Ally from Benares, after having assassinated several of the most respectable inhabitants on that station. This illiterate and savage youth was raised to the throne by the caprice of Azoph Dowlah, about a year and a half since, and had been lately deposed by Sir John Shore, in order to make way for the lawful heir of these provinces Saadut Ally, brother to the deceased Nawab. This prince justly alarmed at the escape of a desperate assassin, with pretensions to his throne, has implored the protection of the Company's army; and this circumstance will afford us an opportunity of examining the state of this singular

gular kingdom, which has so long been allied to the British, and protected by their troops.

BARCILLY is a large town, the capital of Rohilcund; the route to it from Anopseer has been by Chandowsee, Bisowlee, Owlah, Aligunge, and some other villages of little note; for this fine country within the last twenty years, has become a vast desert. Extensive wastes every where meet your eye, which were lately in cultivation; but which are now covered with long grass, which in the hot season becomes so parched as to be easily combustible.

OF this we had an alarming proof by the accidental kindling of the grass to the windward of our camp: The flame spread so instantaneously, that it was with some difficulty we were able to save our tents and baggage. This accident suggested to one of our officers a plan of annoying an enemy, which I do not remember to find in use in the annals of the most ingenious destroyers of mankind. It is to set fire to the grass to the windward of the camp, and while the enemy was busily employed in getting it under, to attack him on the flanks and rear: Happily for the prevention of such a measure, such an extent of desolate and rich fields are no where to be met with but in Rohilcund.

AMIDST the present solitude and gloom of this province, you see evident traces of its former cultivation. The clods left by the plough are not yet melted

melted down, so as to assimilate with the surface; nor is the grass of that extraordinary coarse and ready species which rises upon fields in their primeval wildness, or that have long been out of tilth. A very little effort would again bring it back to its productive state, were there inhabitants to cultivate the soil.

BUT from the quantity of land under crop, the population of Rohilcund must be very small; not the hundredth acre is in cultivation; a proportion so small that the wild animals are in danger of devouring the people and their subsistence. You here scarcely ever see a barley field that has not several huts of straw erected without walls, to accommodate a watchman in the night. The deer invade the crops in such numbers, that without this precaution it would be destroyed. Foxes, jackals, hares, and almost every sort of game range in the deserted plains unmolested. The march of the army puts them to flight in all directions. It was, I believe, one of the charges brought against Mr Hastings, that he lent a brigade to Azoph ul Dowlah for the extermination of the Rohillas. The face of the country offers but too strong evidence of the fact of depopulation; but it must have been owing to a rigorous policy afterwards that the country remains desolate, since the conquest of a British army has invariably the contrary effect, by increasing the security of the people.



THE hills have this day and yesterday been constantly in view, and more distinctly visible than ever. They present the appearance of vast towering and abrupt precipices of ice, compared to which, the Glaciers in Switzerland would probably appear as an inconsiderable hill. Nearly in the direction of the mountains, the wind blows fresh, and so cold as to freeze the water in our tents. The thermometer in them has been last night as low as  $31^{\circ}$ . but this will not account for the violence of the congelation, which I apprehend is owing to the great quantity of saltpetre with which the soil here is impregnated. In China the same circumstance is brought to account for the preservation of ice, which is there carried about the streets upon carts, without melting in any considerable degree.

*FEB. 3.*—The large river Ram Gunga lies between this city and our last encampment at Aligunge; we crossed it on a bridge of boats, too slender for the weight of the elephants, though it bore the carriage guns. The sagacious animals, apprehensive from its appearance, that it was insufficient for their weight, could not be induced to attempt it, though they passed that stronger one over the Ganges without the smallest hesitation.

THE fort of Barcilly is deemed a command of great trust by the Oude government, as it keeps in check this recently conquered nation. It is at present confided to Mirza Ali Khan, a son of the Nawab.

wab. He met our army with a splendid retinue of cavalry and howdahed elephants ; but did not find the General, who had left the line of march to view the scene of action between our army and the Rohillas in 1794.

THESE warlike people, untaught by their former defeats, with thirty thousand cavalry, bravely attacked our troops, who by some strange mismanagement gave way on the right, and were cut down in great numbers. Our whole line, however, from the center to the left, maintained its ground so steadily, that the victorious Rohillahs were afraid to resume their attack, and the battle ended in their total defeat, though with a greater loss on our part than had been ever sustained by so small an army.

MONUMENTS are uniformly erected by the Mussulmans over the graves of their deceased chiefs : many of these are now standing here, where a person is appointed to keep perpetual lamps burning at the graves of distinguished persons. The Mahomedan religion, however it may prohibit any sensible object of worship, avails itself of the respect of friends for their relations, and for eminent characters, in animating their devout feelings : a departed warrior is by them revered as a saint.

BARCILLY is a large town, and crowded with inhabitants, who loiter or wander through the streets, without much appearance of business. It is probable

probable that the want of protection in the country forces a great number into the town; but how they support themselves there does not admit of an easy solution. Few manufactures are vended in a country where the inhabitants are thin, and where even these are so poor as not to aspire at any of the luxuries of life. Sweetmeats and confections, different kinds of grain, with ornaments for the women, seem a great part of the commodities that were exposed to sale in the shops. Brazen water pots are here manufactured, but in smaller numbers since the ruin or emigration of all the wealthy chiefs.

HAFEEY RAMUT, the first Rohilla prince who was slain in the battle of Cutterah, lies interred in a large mausoleum, which forms a very distinguishing ornament to Barcilly. The fort is a large irregular mass of building, equally destitute of elegance or strength. It may however prove a check upon an irregular army without a battering train. Like all the other forts in India, it has no bastions for guns; a strong argument against the practical use of field-pieces being known in the country.

THAT the enterprise of Europeans settled in this country may add to the industry and wealth of the natives, has already appeared in various instances. Even the wretched government of Oude has not been able to counteract its operation. A few active individuals of our countrymen, in defiance of all the obstacles thrown in their way, have been able to introduce

produce the culture of indigo and sugar; and to extend the trade in cloth manufactured at Tanda and Kerabad. It is this circumstance that has hitherto warded off, not the decay, but the ruin of this country, which Mr Hastings had predicted. The Vizier's inability to pay the subsidy has often been pleaded; and from the deficiencies of his revenue, upon perhaps fair grounds.

THE provinces of Oude and Rohilcund are naturally fertile, yielding rich crops of wheat and barley; and the wretchedness and poverty of the people, however much it may reproach government, does not militate against this fact. In the time of Sujah Dowlah the revenue amounted annually to upwards of three millions, under no very correct management. The natives are themselves of opinion, that with the ordinary protection given to the British territories in India, these provinces would yield a revenue of four millions sterling.

THE prosperity of the Vizier's dominions is not only intimately connected with that of the India Company, but with the British commerce in this part of the world. With a greater degree of wealth and protection, their inhabitants would become customers for the broad cloths, cutlery, arms, and other European articles; and might prove the means of conveying them into Candahar, and those nations towards the banks of the Indus. The fertility of the

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lands on the banks of the Ram Gunga, the Goon-tee, and the Gogra, would powerfully second the efforts of a regular government in improving the condition of the people. "In the Dooab the soil is so much adapted to the produce of indigo, that the plant is there found in its wild state; and in this produces a much greater quantity of dye, and of superior quality to that produced by cultivation\*." The sugar cane, which thrives remarkably through the country in Rohilcund, is more luxuriant than perhaps in any other part of India.

THE fertility of the Vizier's dominions is secured by the copious streams which every where pervade them, at once enriching the soil and facilitating the means of conveyance. What effects a free trade and protection might produce on kingdoms so greatly favoured by nature, it is difficult to conjecture; but they certainly promise a more abundant supply of tropical productions than the West India islands. Whatever governor shall put in activity these grand sources of improvement, by removing the oppressions and iniquities of the Oude government, will surely confer upon himself higher honour than they can claim who laid the foundation of the British power in India.

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\* Vide *Civis Letters*, p. 16.

THE outline of a very plausible system of regulation was published some years ago, and has, I am informed, received the approbation of some of the best judges. It consists only of a few articles, which you will excuse me for inserting in this place, in the humble hope that they will be adopted.

1. IT was proposed that a member of the Supreme Board, or a senior servant should be nominated resident at Lucknow, to act as minister to the Vizier; but answerable to the Supreme Board.

2. THAT four civil servants be appointed to Lucknow, as a board of revenue and trade, at which the resident shall preside.

3. THAT the country should be divided into districts as in Bengal and Behar, and civil servants appointed to each to collect the revenue, under the same regulations as in the Company's territories.

4. THAT Adawlets, or courts of justice, be established in each city and district, with a judge and register, servants of the Company, and subject to the same regulations, as they are in the other provinces.

THAT

5. THAT a treasurer and paymaster, and other necessary officers be appointed from the servants of the Company.

6. THAT all imposts and duties be entirely abolished; and that all goods, the produce of Great Britain, or of the Company's provinces, be permitted to be imported to the dominions of Oude, and the countries well of them, and there sold duty free; and that on the other hand, all articles the produce of the Vizier's dominions, should be imported into the territories of the Company without molestation.

7. THAT the whole of the Nabob's troops should be disbanded, and two brigades of cavalry, consisting each of six regiments, five hundred strong; and two brigades of infantry of the present strength (1793), be raised to defend and protect the country; these to be on the same footing, in all respects, as the Company's other troops now in these dominions.

8. THAT the surplus of the revenue, after paying the above civil and military establishments, and other expences of the government, all of which shall be regulated on the strict principles of economy, be paid to the Nabob for his expences, and to defray such pensions as he

he may choose to pay to his relations and dependents \*.

## PROGRESS

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\* Since writing the above the Marquis Wellesley has resumed the government of Rohilcund, and adopted nearly the very plan here mentioned.



PROGRESS THROUGH ROHILCUND TO LUCKNOW.

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*Camp near Belgram, Feb. 1799.*

OUR route through Rohilcund to this town presented to us a great extent of the devastated provinces of the Nawab Vizier. The first march from Barcilly to Fquridpore, conveyed us for fourteen miles through fields almost entirely waste. Two bridges of brick facilitated our passage over small rivers, which water this once plentiful region. The face of the country was, during this day's march, diversified with heights and swells, a circumstance very rare throughout this vast plain, from the Thibetian mountains to the bay of Bengal.

NEAR the line of march, lies Cutterah, a large and ruinous village, remarkable for being the scene of  
that

that decisive battle of 1774, in which Sujah Dowlah defeated the Rohillas. This action decided the fate of that brave people; for in it Hafez Rhamut, their chief, was slain, and our army penetrated their country as far as Loll Dong at the foot of the mountains.

THE old village of Cutterah, is a motley assemblage of ruinous mud houses, not a tenth part of which are at present inhabited. There are but few officers who were present at this engagement, now surviving; only three in our army were there; and these from the fameness of the fields, are unable to give the exact position of the two armies.

*Feb. 7.*—A march of twenty-two miles brought us through the large villages of Tilhara, and Shah Jehanpore; where we saw many specimens of the dwarf bamboo: That useful timber does not attain to its full size, so near the mountains, but branches out into a shrub of great beauty and utility in a hedge. The new village of Cutterah is surrounded with a very thick range of these bushes, which are still of sufficient height to render the houses inviolable. It was at this place I saw a species of the large Bat, or flying fox of India. It measured three feet and a half across the wings; and the mouth, jaws, and colour of the hair, exactly resembles that of the fox.

THE country seems for some part of this journey to have been employed in rice crops. The fields are small, and each surrounded with a small dyke or dam to confine water for this crop; the barley, however, is managed partly in the same manner, and as rice is hardly any where a produce in Rohilcund, it is probable that the small dams have been erected for watering this produce.

THERE are a great number of inhabitants in Shah-jehanpore; the town is confused, dirty and ruinous, excepting a few strong places, that are intended either for prisons or serais; there is no house that rises superior to a hut. We had here an opportunity of noticing the method of educating the children; which seems well adapted for communicating the common and necessary branches at a small charge. The boys are assembled in a kind of open shed or verandah, on the side of the street; the airiness of the place must render it cool and healthy. Each boy is provided with a black board of wood, something like a slate, upon which he writes the letters with a pencil of chalk. While he learns to write the characters, he at the same time acquires their names, and the power of each when joined in a syllable; words and sentences are next learnt; and thus reading and writing are attained by one and the same labour. I am told that these useful branches are learnt very soon, and by as great a number of the common people as in most countries, in Europe. The Hindoostanee and the Persian characters are both

both used ; some classes write in the one, and some in the other.

WE had some specimens of the kilns made use of for drying grain in this country. They are large earthen pots sunk deep in the earth, and under them a furnace for fuel. These pots are filled with sand, which is heated almost to redness, when it is taken out, and in that state mixed with the grain. A few minutes in this mixture fits it for grinding, when it is cleared of the sand by means of a sieve. By this method small quantities only are prepared at a time ; but such quantities are better adapted to the size and execution of their mills, than larger portions, which would soon imbibe moisture and become unfit for the mill.

*Feb. 9.*—Ourah. The two rivers near Shahjehamp rendered this day's march short. The country is not so well cultivated as the large towns in its neighbourhood would lead the traveller to expect. Alwas has left us on the business of his Zemindary, the punishment of thieves, carrying with him a detachment of the Nawab's army. The frequency of theft and robbery in this country, is not to be ascribed to lenient punishment of crimes. They are no doubt often undetected, but they are, when discovered, punished with promptitude, and severity. Yesterday we passed by two offenders who had been brought before this chief. A short hearing soon convinced him of their guilt; he instantly ordered their heads to be struck off, and

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hung up on a tree in terrorem. The bodies were left upon the ground a perquisite to the jackals. Near the village of Cutterah there were two monuments of the severity of oriental punishment, which I had not before noticed, though such are by no means unfrequent. A small arched apartment of brick was erected round the criminal, who was built up while alive in this enclosure. Suffocation must soon have put an end to his pain. These buildings were pointed out by the natives, who explained their use.

*Feb 10.*—We this day marched to Surnagur, 14 miles. The route leads through Shahabad, a very large town; in extent it reaches about two miles, while the site of the present huts does not perhaps cover one third of the ancient ruins, that appear in the form of hills and broken walls crumbling to dust. This town probably had been verging to destruction, long before the Rohillah conquest; its ruins appear much more ancient and decayed than any which have been effected by that people. or by the Nawab in subduing them. The fields in the immediate neighbourhood of Shahabad, are well cultivated; the crops are barley, wheat, tobacco, and some peas of the small kind. The frost of this winter has apparently been more severe than usual, so far down from the hills. The barley is severely injured: the tobacco seems totally withered, and the mangoe trees, now beginning to blossom, with a full appearance of fruit, nipped or blasted by its influence. It seemed rather extraordinary that the strong frosts we had in  
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the neighbourhood of Anopshere did not affect the grain, where it was more intense than here; this probably is owing to the crop's being farther advanced; for it had not then come to the ear.

THE zeal of the Mahomedans seems, in upper India, to have been too intolerant, and too lasting to admit of Hindoo temples of any size or magnificence. Few of them are to be seen in Rohilcund; whereas the mosques are by far the most splendid buildings in every town. At Shahabad there are many; one in particular claims notice from being entire, and of a very large size. Each chief had on his demise a large building erected over his grave, where his dependents assembled to offer up their prayers for the welfare of his soul.

*Feb 11.*—Buckerah. Our journey was this day only eight miles, through a tolerably well dressed country; the soil however is bare, and so sandy as to rise in clouds of dust. The crop is rather late, partly from want of water, and partly from being blighted by the frost. The season has been so uncommonly cold, that the whole dohl is checked and withered before the pea is formed. This crop is therefore lost. A few sugar fields have presented themselves but the cane is very short and poor in quality. The raising of this crop is the *chef d'œuvre* of Hindoo agriculture; it requires manure as well as repeated plowing and often planting the slips of cane; they must be frequently inspected and cleared of the white ant, till they

they have begun to shoot. This expence is, however, amply repaid when the crop succeeds, for no other grain will yield a produce of equal value, a biggah of land bringing sometimes 60 rupees, even where the sugar is cheap.

*Sandy Point, Feb. 13.*—The journey to this place on the frontier of Owde, has displayed a soil more barren and sandy than any we have yet seen on a march of 500 miles. There are vast tracts without a tree or shrub, which are covered with a cloud of dust as often as the wind blows, which at this season, generally happens from ten to four every day. The bleak, desolate, and dreary aspect of the country, where you are constantly sinking at every step in loose sand, and blinded by the showers of dust, gives an idea of the difficulty of travelling through those immense deserts, that lye between this country and Europe.

EVEN here, however, cultivation succeeds where water is produced in plenty, and we have passed by several fields of good grain where the soil is naturally as light and sterile as that which in its wild state is drifted by the wind. The protection of government, slight as it may be, has rendered this comparatively barren sand, to become more productive than the rich plains of Rohilcund, where the people seem to feel no other effects of the Oude government, than its oppressions, or its vengeance.

A large lake in the vicinity of our camp has supplied

ed us with plenty of water fowl; among these appear the cyrus, the largest of the aquatic birds. This animal can stretch itself to the height of upwards of six feet; even in its ordinary manner of walking, it is nearly as tall as the natives. It makes a beautiful pet, and is very useful in picking up noxious vermin in a garden.

*Feb. 14.*—Belgram. This town though placed in our maps at the distance of 16 miles from Sandy-Point, is not in reality above half the distance. Belgram must have been the capital of a large district. It is still distinguished by a ruinous fort, and moat; in the former the soujdar at present resides. The houses of Belgram are generally of brick and mortar, many of them appear to have been large, and in the best stile of Mogul architecture. The present inhabitants here, as in other towns of this country, dwell in small structures, either of mud or timber.

I found the people, on walking through the town, very conversible. They made their children pay me the compliment of a salam; and one in particular gave me a distinct account of the subjugation of the place by the Nawab's troops, and a detachment under a captain Bailie.

ALMASS has the character of a very rigid collector in this country; his avarice, the vice of age, seems to have blinded him to every prudent rule of government. The inhabitants told me that he is never satisfied:



fied : if a man pay two rupees, he must raise him to three ; should the three be forthcoming, the next year brings a demand of four ; I asked if he was poor, that he was so very avaricious in drawing away all their money, and was at once told what I always have heard, that he is immensely rich. By such exactions, the once rich town of Belgram is a heap of ruined buildings, intersected with a few huts, under which the small remnant of a wealthy people are obliged to eke out their days of misery.

IN a few days our army will reach Lucknow ; for Saudut Ali is in terror of the machinations of his rival ; his imagination leads him to apprehend from others a conduct similar to his own ; hence the pistol, the dagger, and the poisoned cup, continually haunt his mind. The man in this state is surely not to be envied : he is deprived of that conscious integrity which is the great basis of inward tranquillity ; and wants that sort of defence which Horace calls a wall of brass,

*Nil conscire sibi, nulla pallescere culpa.*

## PROGRESS TO LUCKNOW.

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*Lucknow, Feb. 23, 1795.*

MAWLYAH.—THIS is a very large village; in length, fully two miles. The inhabitants are numerous, but the town is mean and irregular, consisting almost entirely of small mud huts. The country round is better cultivated than any we observed since we crossed the Ganges. Almas, we are told, has had an action with some of the zemindars, who would not without force pay their rent; we stop here this day at his request; as he has at present but a small army of his own, it is probable that he means to make use of our *name*, (for that is all he will receive), to over-aw some other refractory zemindar in the neighbourhood. The encampment is this day formed in a very extensive tope of mango trees, whose shade affords a delightful cool retreat for the wearied soldiers.

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These trees are in full bloom, and promise a remarkably plentiful crop of that favourite fruit. The natives are already pointing to the blossoms, with a sort of exultation at the prospect they afford. The mango grove is a favourite retreat of the large monkeys. From it these animals look down upon us with great contempt, conceiving themselves, it would seem, to be a more exalted order of beings, and for reasons, which even human vanity might deem plausible; first, they certainly occupy a higher station; secondly, they receive from the natives a great degree of veneration, and the homage of daily worship; and, thirdly, they live under a better government.

AFTER halting one day we marched to Silhit-gunge. The intervening village of Sultangunge consists of mud houses wholly, but all neat, and in full repair. It is one of the few towns in India which does not exhibit marks of decay. Even here however are the ruins of far more durable and extensive cities, whose only vestige is to be traced by large mounds of brick-dust: these ruins have been perhaps many centuries in their present state. The road sides were this day mostly cultivated: the wheat and barley are fast ripening, and the weather begins to get warm; for the wells under the shade of the tamarind trees are now resorted to by travellers, where they quench their thirst, and shelter themselves from the sun.

*Feb. 20.*—This day brought us through a large jungle into a vast plain, said to be cleared by Miah Almas from a thicket of brushwood. He has here built a village and a house for himself, as he supposes, after the English manner. The place before these operations, is said to have been a nest of thieves, who sheltered themselves in the wide jungle against the searches of the magistrate. The plain somewhat resembles a large park; and is beautified by clumps of mango trees, and fine fields of barley and wheat, which is now getting plump in the ear; a time when grain appears remarkably rich. It is now four months since the rains ceased, yet the whole of the road was this day intersected with sheets of water, owing to a thunder storm that happened two days ago, and which was accompanied with a heavy fall of rain; a rare occurrence at this season.

General St. Ledger has gone to breakfast with the Eunuch Almas in his fine hunting seat; that is, he will carry his own breakfast to the chief's house, for with all his desire to imitate the English, the accommodations of a Mussulman are wretched: he could not produce a breakfast that a ploughman would wish to partake. Miahgunge is built with much regularity, the streets are more than three times the width that is customary, and the houses are all of equal height, fronted with a verandah of wood. The figure of the town is a parallelogram, the whole surrounded with a brick wall and bastions for the security of the inhabitants, against the armed

banditti who pervade the country. The whole is in perfect repair, and, in my eyes, almost redeems the character of the chief from that parsimony for which he is so remarkable.

WE marched through the villages of Hoffein and Tukitgunge on the 21st. The former is a poor village, named by the Mussulmans after the Imaum Hoeffein, grandson of the prophet. The soil consists for the most part of loose blowing sand; but such fields as are cultivated carry rich crops of wheat and barley.

THIS day we passed a very large bridge over the Sye, a petty stream; and at this season very unlikely to require fifteen arches. In the rainy season, however, it is probable the country may be overflowed, as well as the river swollen. We have seen no Mahomedan structures nearly equal to this bridge.

Tukitgunge is a village built by Tukit Roy, Bukshiee of the Nawab's army. It is after a regular plan, resembling that of Almas, which also bears his name. The Nawab has constructed a third village, called Fattchgunge, more elegant than either; it is surrounded by a square wall of brick, and in the centre, the several streets meet in a large square, in the midst of which stands the Cutwal's house, the chief magistrate of the place.

Kissen Chun has greatly beautified this village by a fine tank, lined with brick, and furnished on all sides with elegant stairs leading down to the water. Here the Hindoos resort for ablution, which they could perhaps not otherwise obtain without repairing to the Ganges. The agriculture is here not so perfect, nor so considerable in quantity, as might be looked for in the neighbourhood of a large capital, which is now so near, that we can discern the minarets towering above the intervening groves of mangoes.

THE village of Fattehgunge was built in commemoration of the victory obtained over the Rohillas at Bctourah, by Sujah Dowlah.

THE town of Viziergunge, near it, was probably built by the first Vizier of Oude. The gates are standing perfectly entire, and are almost the only vestiges remaining by which a traveller can discover that a town had ever stood there; yet the place was perfectly entire about twenty years ago. The cause of its destruction is said to have been the refusal of the Cutwal to deliver up some thieves who had molested passengers going through it. On being threatened with the Nawab's vengeance, it unluckily for the town happened that some persons were again robbed there that same day. On the next, three battalions were ordered to ransack the town, and destroy the inhabitants; an order which they obeyed with such fatal exactness, that not a single hut nor inhabitant

inhabitant was left within the walls. The distance between the two gates is more than a mile, and that constitutes the length of the principal street. The rows of trees on each are still standing, having escaped the flames by which the houses were destroyed.

I yesterday went to view this capital, which is said to contain half a million of souls. Happening to enter the town at the west end; and which contains the poor mechanics, and labourers of every sort, I never witnessed so many varied forms of wretchedness, filth, and vice. The street which leads to the palace, is upwards of five miles, more than one half of which you wade through mire and filth. During the lapse of time, the streets sink from cleaning, or by the blowing away of dust while dry, so that they are fallen in the middle to the depth of ten or twelve feet; and are so narrow that two hackaries cannot pass, nor indeed any carriage however small. My palankeen was frequently stopped by the small asses, who were passing along loaded with bricks. This animal is here so slender that a stout porter could have no difficulty in literally carrying both the beast and its burden. Solomon must have employed an immense number in carrying the materials of the temple, if his asses were not of a superior breed to those of Lucknow.

THE concourse of a great number of people perhaps does not any where improve their morals;  
vices

vice and poverty are the only qualities that this people uniformly display. Some saunter; others lie down in a kind of dubious state between existence and annihilation; others still are intoxicating themselves with the Hookah; a few only labour at their professions. The shew of rich shops and merchandize is remarkably small, though it supplies the luxury of the court, or rather the palace; for here there is little affluence beyond the narrow circle of the prince's family.

THE different palaces of the Nawab, the great mosques, and burying places (Imaumbary) display a sort of splendour; for the Mussulmans are fond to excess of decoration; and this taste always shews itself in their dress and houses, whenever an individual can afford to indulge it. There are perhaps no buildings in Britain equally brilliant in external appearance as the palaces of Lucknow. The roofs are gilt, and the architecture loaded with ornaments, which have altogether a considerable effect on the beholder at first sight. There is however no accommodation within, nothing for comfort or even convenience, the whole being intended for external glare.

THE body of Azoph Dowlah lies interred in an Imaumbary, lighted with a vast number of wax tapers; the grave is strewn with flowers and gilt paper. At one side is a censer with various perfumes; at the other his sword and cummerbund; and opposite



site the head lies the tiara or turban, and a copy of the Coran. The grave itself is covered with rich bread of barley from Mecca. The whole vault constantly echoes to the voice of a company who continue chaunting the Coran. This place has a grand and solemn appearance. Religious ideas have a favourable access, while you stand amidst the dust of kings, and contemplate the inefficacy of their efforts to continue even a semblance of their majesty after death.

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THE COURT OF LUCKNOW, AND CABINET ON THE  
DOWLAT KHANAH.

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*Lucknow, March 9. 1799.*

WE had this day an opportunity of seeing the Mahomedan spring festival, (*eida.*) celebrated by the Nawab. This takes place annually on the first day in March, after the new moon becomes visible, and is kept in commemoration of Abraham's sacrifice. A camel instead of a ram, is here held to be the substitute. The princes of Hindoostan march in procession, at this ceremony, with all their courtiers, and a large military escort. On such occasions the oriental taste for show, and gaudy magnificence, is displayed with labourious and studied attention. And their success must be acknowledged; for though on a close inspection their dress and ornaments will not gratify a chaste taste, yet in a procession they have a grand effect. The howdah's, palankeens, and harnessing

nessing of the elephants, are so contrived as to exhibit one blaze of gold, in which the ornaments from their number cannot well be distinguished.

THE most splendid European court probably falls much short of the magnificence of Saadut Ali upon this occasion. At day break he marched from the palace with more than ten thousand men in his train, exclusive of the military escort, which might amount to two thousand more. His progress was directed to a large plain where tents had been pitched on the preceeding day for the entertainment of the company. The prince all the way, as well as one of his courtiers, was supplied with bags of money, which they scattered among the multitude. In this exercise it was remarked that his highness was extremely tardy ; the courtier dispersed two bags in less time than he did a single one. His hands seemed to perform with awkward reluctance an office in which they were but feebly supported by the parsimonious sensations of his heart.

As notwithstanding its pomp and ostentation this is a religious ceremony, the first part of it, after arriving at the ground, consists in a solemn invocation of the Deity for plenty and prosperity during the ensuing season : and though the prayers are here accompanied with alms, it is probable that few beneficial effects are produced by these indiscriminate donations. That idle crowd which haunts every large capital, here consists of the most profligate and  
worthless

worthless of the human race ; and of these it is only the most resolute and daring who profit by the scramble. Their gains serve perhaps no other purpose than to supply their dissipation for a few days, when they are again forced by their indigence to desperate courses.

HERE the transitions from transient acts of devotion to the grossest crimes, is short and frequent. Only two days before this devout procession, an attempt was made by some of these ruffians to assassinate Hossain Reza Khan, a very popular minister of the prince. It failed in the execution, and may therefore probably be soon reiterated. A few days before this period several of the troops were found out in a traitorous correspondence with the deposed Nawab. Superstition, treachery, and cruelty go here so closely connected, that few moments only can intervene where reason guides the conduct. This religious solemnity probably, amidst all its splendour, did not afford one sacrifice either of clean hands, or a truly devout heart. Ten thousand rupees were given as donations to the Company's troops ; a few of whom were added to contribute to the splendour of the occasion. Amidst all this blaze of wealth and magnificence, thousands of poor wretches are seen on the road to all appearance in real want. There is not, perhaps, in the whole compass of human affairs a more striking display of the inequality of conditions, than this scene affords. Extravagant wealth is amassed in the hands of one man, and is confined to the

narrow circle of his favourites ; and this superfluous store is grinded from the faces of the indigent, who are wallowing in all the filth of penury and wretchedness.

THIS ceremony, grand as it appeared, is probably a miniature only of the Court of Delhi, in the prosperous times of the Mogul Empire. There the wealth was nearly tenfold of what is possessed by the Court of Lucknow, and equally under the controul of a single person.

THE festival of Eida seems to resemble the feast of Tabernacles among the Jews, which by that people was observed, we are told, with as little moral effect or purity of intention. “ Your new moons, and your Sabbaths, I cannot away with ; wash ye and make you clean ; put away the evil of your doings, &c.” The Mussulmans and the Jews seem to have equally regarded superstitious observances, as a substitute for every moral virtue, and a compensation to the Deity for the violation of his laws.

*March 15.*—I this day went to view the Nawab’s Menagerie, which consists of different birds and quadrupeds. In this collection, variety or usefulness has not been so much sought after, as the oddities of nature. Such a cabinet might be extremely useful, if models of machines for the improvement of husbandry or manufactures, or superior breeds of cattle for the purposes of agriculture, were collected for the inspection

inspection of the people ; but no views of this kind seem to have actuated the Princes of Oude in the formation of their collection.

THE different specimens of clock-work are curious and expensive, but by no means calculated to explain to the natives the principles of that useful machine. They are viewed here as elegant toys or play-things, which captivate by the surprise which is necessarily occasioned by seeing their effects ; but I do not find that any native has yet attempted the construction of a watch or clock.

IN the same apartments in which these machines are kept, there is a considerable number of mirrors and other toys, which, though useless here, must have cost an immense sum in bringing them from Europe. Some paintings are here shewn, both native and European : the most striking of these is a portrait of Sujah Dowlah in the act of shooting a tiger, which had leaped upon the howdah of Colonel Harper, and was ready to carry him off. This engaging picture is hurt in the effect by being too small.

A considerable number of tigers are kept in different apartments near the palace, but so mean and nasty in their appearance that a considerable tax is laid upon your patience in going to view them. To their keepers the tigers are so tame, that they allow

them to stroke them on the back, as a cat, and like that animal, seem gratified by your attention,

THE rhinoceros is the most remarkable animal in this collection; the only one here is about twelve years old, and seems not yet to have attained its full growth, being of a much less size than the species generally attains. His strength and ferocity are prodigious: no elephant dares to attack him; for his horn proves at first stroke fatal: it is a large protuberance growing exactly upon the snout, and sharpening into a point, and with it he can rip up the belly of the largest elephant.

THE rhinoceros is protected by a thick horny substance, studded over like a shield; which from its hardness and thickness must protect the animal from any foe. A sword would make no impression upon this singular hide, and where it overlaps, it would probably repel a musket ball.

OF the sheep there is a great number, and some variety; but the Cabul breed seems to enjoy the largest share of the royal favour. They are in general very fat, and distinguished by a large protuberance on the rump far exceeding that of the Cape sheep. This excrescence is semicircular in form, and of nearly half the size of the whole body. Some of these sheep are painted in different colours to gratify the fantastic taste of the natives, a practice which they follow with their bullocks and horses. When they.

they intend to appear very fine, they go so far as to gild the hoofs and horns.

THE stables of the Nawab consist of a large square court of buildings, supported on brick pillars, with a view to the admission of air : these consist of more than one range ; that which I examined contained about four hundred stalls, almost all filled with very excellent Persian horses. There are separate studs for mares ; but breeding does not seem the favourite pursuit here : I saw but four foals ; probably the confinement in which they are kept is unfavourable to the dam and the colt. A park of mares and colts is deemed in England a very agreeable object, but in India it is unattainable, the fields being parched for nine months in the year ; a groom is here put to his wits end for provender ; hay is unknown ; grass roots scraped up with a sharp trowel, being the substitute for this provender ; and it is often procured on places which you would declare absolutely bare earth ; every thing above ground being completely burnt away.

A very large breed of Guzarat bullocks is kept in a cow-house near the stables : the introduction of this breed among the peasants, one would imagine would prove of great advantage in a country where the draught-cattle are so small and pitiful as those of Oude. But the Ryut, if he gets his labour done, cares not in how slovenly a style it may be executed ;

or



or even how small the quantity performed. This is the nature of the race, even where it is fully protected; what then can we expect here, where nothing is secure, and where a good team of cattle would be a kind of attractive bait, to bring the robbers to a farm, or an Aumil from the Court, both equally addicted to plunder?

One of the curiosities of this place is, a mixed species between the goat and deer, which is spotted, and neater in its form than the ordinary goat. The variety of horned cattle, horses, and sheep, is much greater than in Europe. Here are kept a few buffaloes in remarkably fine condition: they are not fully tamed; and by some means or other are much handsomer than the common domestic kind. Apes, monkeys, and a variety of the tropical animals, make a part of the raree show exhibited at this Court: one of the former is taught to make a very genteel salam to his visitors. The natives of India are very fond of these accomplishments; many of them spend whole days in teaching parrots to speak a few Persian words. The management of the Menagerie employs a great number of people; and although their allowances have been much curtailed since the commencement of the present reign, the department must swallow up large sums. Many crores of pigeons are kept at the public expence, and elephants and camels to a large amount.

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